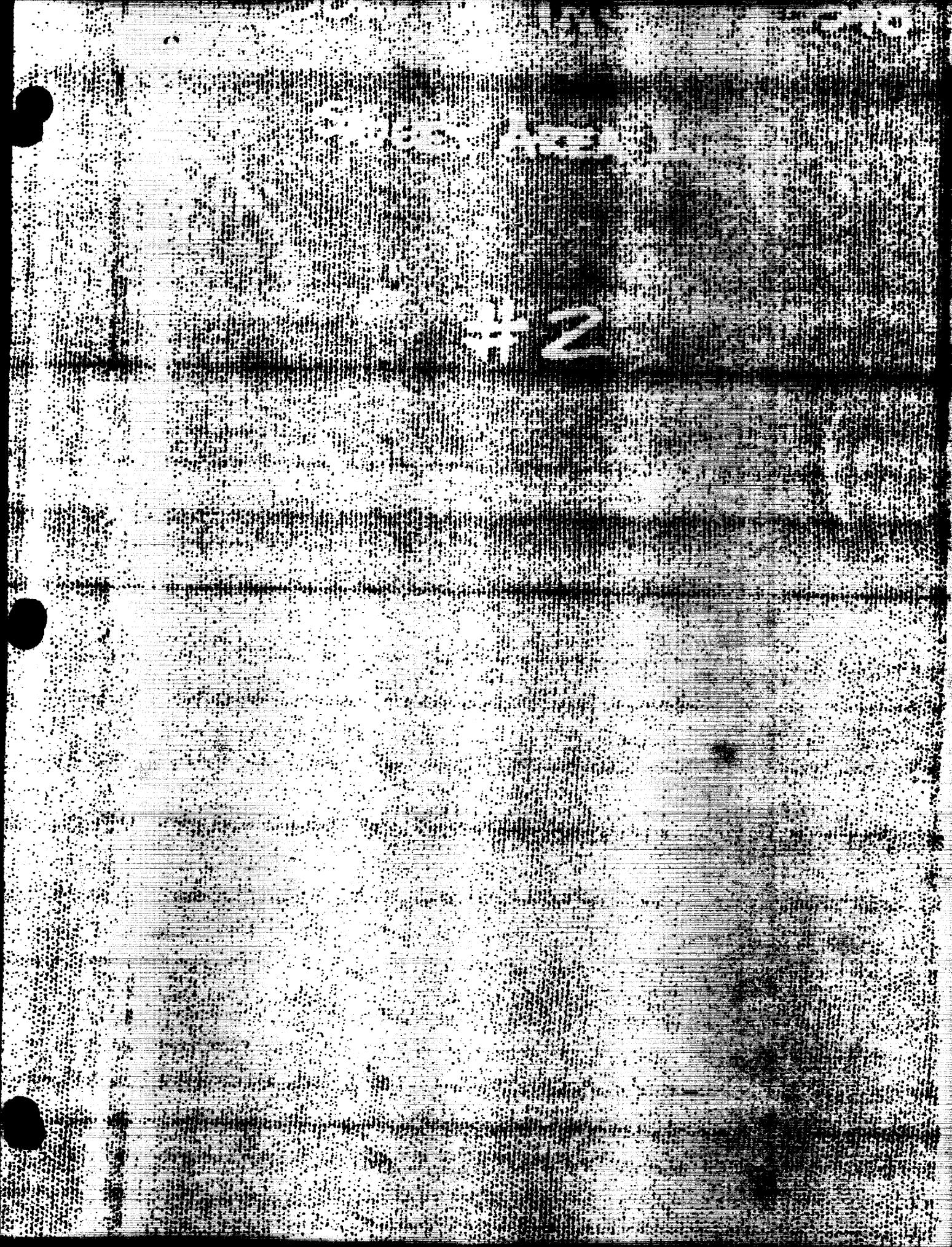


SDMS US EPA REGION V -1

**SOME IMAGES WITHIN THIS
DOCUMENT MAY BE ILLEGIBLE
DUE TO BAD SOURCE
DOCUMENTS.**



Solutia, Inc. - Saget Area

Record Book #2

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near Menominee

1

9/17/99 Site G

- Triangle Labs

Frank Stevens (919) 544-5729 x258

1145 Spoke w/ Mike Ondrechek of Weston.
Mike asked about Maine Clean Activities
Next week. I indicated that he
should telephone Kimberly Peirce
@ Solvita concerning activities because
I only knew generalities.

1200 Gave Mike; Kimberly Peirce #
674-3202

201

1330 Spoke w/ Frank Stevens @ Triangle
Labs about PUF in voice #9

(11.2-5-22)

9/20/99 Received 6W Flow Protocols

142-8-84 to GM, 2-A-84 to natural

Read 10 min's report & et al - 2

142-8-84 to GM, 2-A-84 to natural

Final report will be sent 1st

gives more no allow grant funds

: higher interest rates

" would now provide

10% financing

0.5% 1st 11 months

0.8% thereafter

(217) 333-4300
Chamberlin 1L 61820

2204 6th St. N.E.
Minneapolis Survey

of D. firm property.
about three wells on north side
Terkphane Illinois Geologic Survey

location of P3-A-S.M.D. & P3-B-S.M.D.
spoke to P. times small about

Mr. K. and. Mr. Leston O'Gorman
likely about location of P2-C-S.M.D.

spoke to Mr. K. O'Gorman

P2-C-S.M.D.

P2-B-S.M.D.

P2-A-S.M.D.

P3-B-S.M.D.

P3-A-S.M.D. ~~etc.~~

Mr. K. and. Mr. Leston O'Gorman
likely about location of P2-C-S.M.D.

Went around w/ Kumbey Party of 1030

1300852 A23

3) Nut-Gard Home 1800755-6000

A2) Mr. Murdy P.C. Inc Co 1800-537-6644

1) Mrs. O.I. Corp (24) 742-3106

of Drive - P. P. C. Inc. Milwaukee
At Metro E. & C. Rd. N. Sash

Residential Residential differentiation

regional groundwater monitoring

9/21/99 K. Perry & A) Cook

1000 Met w/ Joe Burroughs of Cerro Copper
to designate Piezonate Locations
(P1-A, B, C - S, M, D). Also, located
selected thickness sampling stations
& discussed waste sampling bores
to be completed next week. Joe
will talk w/ Cerro's utility
person to okay locations.

1100 Left Cerro Copper Arrived back
@ Site H completed trench along
falling spring Road Based on
conversations w/ Eric Kemper of
Weston the Major of Sayet
had stopped by and claimed
not to know what was going on.
He was given Mike Light's name
& phone number @ Solutions

1105 Off Site H to check on

Piezometer installation site + 100' N 100'
trench about 10' deep and 2' sq. Blot
missed most of the area due to
obstruction of the road to the north
V. good in + 25' + gravel
200' E of site V. good in The first
100' of the trench

201

1105 Left - V. good in the first 100'

and good in the last 100' of the trench

and good in the last 100' of the trench

and good in the last 100' of the trench

14
ACB house with two beds and a double
tool storage. (Photo #33 in album)
house shared off the ground surface
Explane Park just west of the well.
F 12' off of Park Creek Road @ an
end which starts by the EEE-108

1230

15
left side to the right of EEE-105
P3-B. WE Way 50' N A) Coal
dry just 20' to the left bank since
P3-B. Tan fine sand bed that
intersects C bottom sand

150 Left side - Coal on bottom of EEE-105

16
more to the right. Remains of EEE-105

17
Sand EEE-104 is top of west of

18
bottom of coal bed.
No evidence of glacial drift
exists (as yet) in cap layer.

19
S 16' from top 6" of well

20
± 350; so high SE corner of
clay face clay bed come back

21
road cut remains of EEE-103

22
S 16' EEE-103, 104, & 105

23
Road C - which has partly to the
EEE-105. EEE-104 = 11'. No

24
EEE-103: EEE-104: EEE-105:

25
top for about 6" of well

26
1900 Late September (Sept 1st) to

27
9/22/59 A) Coal - WE WEIGHT

28
Aug 21. Low temperature / low secular

Regional Piezometer Installation
Well Locations

9/22/89

- 1245 Left to meet Kimberly Perry to meet w/ Wiese about access to their property. WE Wright wanted @ Edith Lake & looked for EEG-105
- 1315 Arrived back from Wiese to help WE Wright look for EEG-105. Back-up for now.
- 1345 Left site of EEG-105 to look for EEG-109 & EEG-111. Could not access gate to Site M, too overgrown w/ brush. This is location of EEG-111 located EEG-109 on site. Left off rd back of Metro Equipment
- 1445 Left Metro Equipment, to check on piezometer installation
- 1500 Arrived @ Pittman School Site - Tony Finch & Jim Hanes Worley on 60' hole @ P3-A. Eric Keiper and Chokri Potts on-site. Metal detector w/ western showed up white in soil at 10'
- 1510 Left site for lake lunch
- 1530 Back from lunch. Arrived and checked same site. WE Wright received telephone call from Robins about new work truck. Also called office for messenger. Robert Siple was suppose to be in
- 1600 Returned to Pittman School to check on piezometer installation progress

9/24/99

11415

OFF-SITE - MEETING

AT CAFE

9/26 < TUES >

1630 Board of Shays Ave Site

do fill out paper work

1630 Board of Shays Ave Site

Logistics/Supervision/Coordination

547

5097.

ΦΣΣ

SHEI

~~DEB 10-11-1988~~ 10-11-1988 ~~10-11-1988~~

1030

~~10.30 AM~~

111-523 - Some very long sentences

~~1000 - 5000 lbs.~~

55-22-6

10/12/99 ongoing on camping

- ④ CORRODE WITH 2 SAMPLES \Rightarrow
Jim Bruce's 2 way Rig
SMALL COLLECTOR SPACES
~~WATER AT 85'~~

SET UP WID CORRODE AT 9:00
TO ~~85'~~ SAMPLE GROUND WATER
NARROW - 108' TRY TO TAKE
SAMPLE TO 60' THE FIRST SAMPLE
BUT ROD WAS FULL OF CLAY
(which was not previously ~~not~~
EXCLUDED HERE). ~~RE~~ RESET
TO DO 60' BODY AGAIN AND
~~85'~~ NO CORAL(~~S~~) WHICH WAS
PRODUCED. WILL TRY TO LIFT
TO 100' FOR NEW SAMPLE ON
NEXT BODY. NO CORAL WATER
SAMPLE COULD BE COLLECTED AT 60'
DUE TO CLAY SOIL AT THAT
DEPTH

1:15 RESET TO 78' INCLINOMETER

OBSTRUCTION FOR NAD CHT FOR
SO. OK COLLECTS A WATER SAMPLE
AT 78'. WILL RESET AND TRY
100' AGAIN

1:15 RECOVERED 6.5 GALLON OF VERY SILTY
WATER FROM WHILE NOT PLANTED TO
SAMPLE MAY STILL BE IN CLAY SOIL —

10/12/99 11 AM - 100' ACFTM 100' 35°

2.45 RESTED RESET 10' WEST AND DRYED

TO CDT TO 100' ACFTM 100' 35°

→ 100' 35° A 90° ESE AT 00:00-4:00

~~Boer's~~ Being prepared - Some water will be
easier to get (fountain). Water continued
to flow at limited volume so we
continued to ~~the~~ Pigeon lake. Decided to let
~~Bob~~ Bob's station police over night
to Lester F. Waded woods
come into Boers -

→ 100' 35° A 90° ESE AT 00:00-4:00

10/13/99 URGENT WATERSAMPLES

SUNNY 70

ARRIVED ON SITE WARD JIM/CARROUSE
AT 8:00 TO SEE UP AT 100' CEROPROBE

WE LOST RODS SITTING IN FLOOR DUE TO LIGHT
WIND REASONED TO ~~COLLECT~~ TO ATTEMPT TO
COLLECT THE WATER SAMPLE. WE LOST RODS
ESTIMATED TO BE 15'. THIS IS CLOSE TO
SHALLOW LOW LEVELS IN AD AREA
WE LOST TWO MORE WHERE JUST
CUT WATER FROM THE SURFACE
~~ROD~~ FLOWING DOWN THE RODS. ONLY
RECOVERED 1 CEROPROBE AND PURGED DRY. NO
WATER SAMPLE COLLECTED.

10:00

10:00 RELOCATED TO AREA OF EEE-OI
SET UP CEROPROBE TO 60 TO 65'
TO FIRST WATER SAMPLE. ALL
DRAINS WERE SAMPLED THE WHILE
AT THIS TIME. JIM ~~IS~~ OPERATING
CEROPROBE. EASY IS TRICKY ITEM
CONSIDERATION

11:00

COLLECTED WATER SAMPLE AT
60' UGLOW/EE-OI (60'. - PURGED 0.5 gal
AND WATER CHILLED AND MEASURED TO SAMPLE.
APPLIED

12:43 JIM BENT RODS TO 100' TO
TRY AND COLLECT 100' SAMPLE.

1:00 ~~COLLECTED~~ NO CEROPROBE AT
THIS INTERVAL. JIM THOUGHT
HE HAD COLD AT 60' SO HE
PURGED 100' TO 80' TO TRY TO
SAMPLE

10/13/97

WINDSHIELD

11

1:23 RESENT. PULLED BACK ROCK
TO 80' TO TRY SPARE ONE
MORE TIME. NO LATERED FLOOR
SOL.

7:00 PT FAILED AND 80' FAILED
PULLED RODS AND ~~TESTED~~ TESTED
76 ALSO FAILED IN THE ISSUE.

4:15 PULLED 200' ROCKS INTO 60'

BUT DIALED OVER WIRE. ~~TESTED~~
STUCK AGAIN AND WIRE BREAKING
PULLED OUT ONLY

TOLD LEE #3 CANNOT

CUT. ALL SAME PROBLEMS

REMOVED ROCKS AND SAWED AT TRAILING

ROCKS AND CUT WITH C

HAD IT SCREWED TO GROUND, SO 70

ROCKS AND CUT WITH C

REMOVED ROCKS AND SAWED AT LEADING

ROCKS AND CUT WITH C

WIRE BENT

1:41 AGED

(REMOVED ROCKS AND CUT WITH C)

REMOVED ROCKS AND CUT WITH C

REMOVED ROCKS AND CUT WITH C

6/1/99 ~~company~~

ARRIVED AT PEG WELL (OPTION)

WT / 20' / 40' / 10' →

= ~~SEGW~~ - 51 - DEAD =

07.02.52.

ARRIVED AT SC IN FRONT OF

102 WILLIAM STREET. THE SCREEN

DEAD FISHES AND WIRE SET GO

IN THE CENTER OF THE STREAM

10' WEST OF THE END OF THE

ASPECT.

SENT RODS = TO 4' AND ~~TRIED TO MAKE~~

9.6" WIRE COAT GRAINS (ETC) AND

WILL ATTEMPT TO SAMPLE. TRIED AND

FAILED TO REACH THE WATER. WILL RESTART

TO THE NEW TIDE SIGNAL. 10' OR SO CLOSE

OR OF WATER/SEA & BEFORE IT WOULD

TRY. WILL SET AT ONE 20' DEEP FOR

CONCRETE AND SEE WHAT WE GET

11:00 COAT WATER AT 20' AND COLLECTED

COW SAMPLE

Light sand 3' to 4' ~~20'~~ ~~WATER~~ CONCRETE

A LIMITED AMOUNT OF WATER SO

WILL SET A TARPON WELL AT 40' TO

COLLECT A SAMPLE

10/15/99 recent

Res. ~~date~~ Concord Office samples

SLOW-SZ. SET TRAP PBO WELLS

AT 15' AND 20' TO COLLECT

FBS Z samples at 20'

- collected over pro (part of)
wind company's property.

SET TEMP WELLS WITH CONCRETE
at Justice Library 200' IN FRONT
OF LOS Audit. ~~AT DRAIN~~
was TEMPORALLY TIED TO
DO SAMPLES.

COLLECTED FIRST SAMPLE FROM 15'
AFTER ALL THREE TRAP WELLS WERE
SET.

COLLECTED 2 NS/MD sample at
20'.

COLLECTED 3rd sample at 40'.

J.W. REBLES TAKE ~~TEMP~~ TRAP
WELLS AND WE LEFT SITE.

100 ft. deep basin
100 ft. deep basin
the deepest part of the basin.
The deepest part of the basin.
The deepest part of the basin.

50 ft. deep basin

50 ft. deep basin

50 ft.

50 ft. deep basin

12-06-99 Alluvial Aquifer Sampling

0830-0900 empty water into transcut until tank
 0900-0935 set upon AA-23-AA-I-53-(34-36) FT
 0935 begin purging 54 ft 10 in = 510.0 ft
 1035 begin purging TH 730.000 > KJ 73
 1135 - begin collecting sample 54 ft - 390
 1300 - sample collected > PIDE
 1315-1345 < 54 ft 10 in = 510
 1345-1355 pitch marks location = 510
 1355-1415 go to 44-48 ft BEG, S
 1415 start purging
 1700 On site

Alluvial Aquifer Sampling

12/7/99 D THOMPSON

8:00 ARRIVE AT AA-I-53-54-5841

8:00-9:00 - DECON RODS

9:00-9:15 DRIVE RODS TO 54-5841

9:15 BEGIN PURGING

11:10 - Begin Sampling

P.I.D - during purging = 1.0 BREATHING ZONE

P.I.D - reading soaks = 37.8 from NECK OF SAME BOTTLES

12:10 - FINISHED SAMPLING

DISCUSSED THE PID ISSUES WITH DAVE,
 WE WILL MONITOR MORE FREQUENT AND
 TAKE APPROPRIATE ACTIONS IF CONDITIONS
 GET WORSE.

12:20 LUNCH

100 DAN OF IPS RUE & DECON RODS
 PID OUT OF CALIBRATION, RECALLED

SERIALIZED ON: 12/7/99	DATE SERIALIZED:	(DATE)
SERIALIZED BY: D THOMPSON	SERIALIZED BY:	(SIGN)
STANDARDS USED:		
100 ppm		
WEIGHTS TRACEABLE TO:	STANDARDS:	(DATE)
100 ppm		
ENVIRONMENTAL CONDITIONS ARE SUITABLE FOR CALIBRATION <input checked="" type="checkbox"/>	ENVIRONMENTAL CONDITIONS ARE NOT SUITABLE <input type="checkbox"/>	NOTIFICATION REASON YY NN

12/7/99 DTHOMSON AA-I-S3-64-68 #

AA-T-53-64-68 #1

INITIAL PIG BREATHING READINGS

~~BEGAN PURGING AT 1400~~

PICO-OPIN BREATHING ZONE

~~ERIK K ARRIVED AT 1500 TO TAKE SPLIT~~

1100 - TAKE OUR SAMPLE AND ALSO TAKE

ERIK K. SPURT w/DIOXIN.

PID: BREATHING ZONE

PID: SPUNNING THE WATER

17:30 FINISHED SAMPLE AND

PACKED UP FOR THE DAY

Alluvial Aquifer Dampines

12/8/19 INITIAL P.D = 0.02m BREATHING zone

8:55 BEGAN PURING

1100 BEGAN SAMPLING

BREATHING ZONE PID = 0.0000

SCANNING SAMPLE CONTAINER PID = 288 ppm

~~1145~~ FINISHED SAMPLING

Lencell

~~1245~~ Price 2005 \$ DEC 2005

Pull Roads & Decan

22.

100

12

124

130

(P)	CALIBRATOR	NO.: 1003
(M)	CALIBRATOR	NO. 1003
	STANDARD	NO. 1003
:0:	STANDARD	NO. 1003
1003	EMINENT	MANUFACTURER: NATIONAL CO.
1003	SUPERIOR	ADDRESS: 1003

3:30 44-1-33-84-8841- ARRIVE AT SITE AA-1

Row from the middle layers and

DE WEDD TO DE EQUILIBRIUMT BLAAN

BESTIAL EQUIPMENT BUREAU SAME

1000 DMR BEGUN TO DRIVE TO NEXT

BEGIN PURSUING AA-T-S3-94-98FT

1330 PID - BACTERIAL ZONE 0.0 mm
Bacterium SAMPLING PID = 0.0 mm BACTERIAL ZONE

EMPT^t WASTE AT DUSTY LINE.

Algebra 1 Chapter 10 Test Review 6/21/19

830 AIRLINE AND BELOW SITE SETUP AA-I-S3-104-055

1945 EIN/SIEDE-SATZUNG 3. SEITEN 5 10

16 NOV 1961 2115 EST - T-3000

Hannibal Highway sampling

12/14/99

807

ARRIVED AT AA-I-S1 TO CORE OUT CONCRETE
CONCRETE DEPTH 10".

8:30

BEGIN PURGING AA-I-S3 - 110-114 FT

10:30

SAMPLE AA-I-S3 110-114 FT

PID = 0.0 ; 4-gas normal during sampling over sample & bi-zone

12:00

Finish sampling AA-I-S3 - 110-114 FT

12:30

began pulling rods and decommissioning rods for AA-GHL-S3
lunch

1:00

get plywood from field site for use under van @ AA-GHL-S3

1:30

arrive @ Hartkirk (AA-GHL-S3) ; set up

1:40

began purging - water recovery was very low

1:420

stop purging to discuss options w/ LEW & DEH

1:440

decide to continue purging and monitor for turbidity
at current screened interval of 20-24'

water recovery improved for a few minutes, but began
to be very slow again ; however turbidity
also dropped

1:460

checked turbidity \rightarrow 2.85 < 5

\Rightarrow begin collecting sample

PID = 0.0 ppm baseline zone & off sample

1:500

FINISH SAMPLE AA-GHL-S3 - 20-24 FT

CLEAN UP SITE, PUT contes around Boring

AND STORED PLTWOOD BY DRIVEWAY in TVA

CONT on top, WEATHER PROOFED HOLE

LEFT SITE FOR THE DAY.

1:500

5:

14

15

16

16

Hawkins Agency sampling

11/15/95

8:30 ARRIVED AT HAWKINS PROPERTY & SET UP FOR
AA-GHL-S3-30-34ft.

9:00 BEGIN PUMPING AA-GHL-S3 - 30 - 39gal

9:30 THE MAYOR'S SON DROVE UP LOOKED AROUND & LEFT
AREA. CONDITIONS VERY COLD, WIND COLD 4°F
4GAS METER NORMAL

PID = 0.0 ppm - BREATHING ZONE

1100 BEGIN SAMPLING. MUCH BETTER WATER FLOW THAN
YESTERDAY AT 20-24 ft.

PID = 0.0 ppm - BREATHING ZONE

4gas Normal.

1120 FINISHED COLLECTING SAMPLE

1120 BEGIN COLLECTING DUPLICATE

PID = 0.0 ppm - BREATHING ZONE

4gas = Normal

1200 FINISHED TAKING DUPLICATE @ AA-GHL-S3-30-34ft

1250 DAN OF IPS BEGINS DECON OF RODS & DRILLS

BACK DOWN TO 44ft. THE SCREEN IS ALSO SET.

1215 GO TO LUNCH

1300 RETURN FROM LUNCH & COLIN PICKED UP BOTH OF
THE SAMPLES TO GO PACKAGE.

1315 BEGIN SETUP FOR AA-GHL-S3-40-44ft.

1330 BEGIN PUMPING AA-GHL-S3-40-44ft

PID = 0.0 ppm - BREATHING ZONE

4gas = NORMAL

1350 TOOK SAMPLE AT AA-GHL-S3-40-44ft

PID = 0.0 ppm - BREATHING ZONE

4gas = NORMAL

1400 FINISHED SAMPLE

1405 DAN PULLED RODS

1420 LEFT HAWKINS PROPERTY

1425 ARRIVED AT JUDITH TO PUMP OUT LAWN

1445 FINISH DAY AT SITE R.

प्राप्ति = विनाय

प्राप्ति = विनाय - विनाय-विनाय

विनाय, विनाय विनाय विनाय-विनाय-विनाय

विनाय विनाय विनाय विनाय विनाय-विनाय-विनाय-विनाय

13... विनाय विनाय विनाय विनाय विनाय विनाय विनाय

1512 विनाय विनाय

विनाय विनाय विनाय विनाय विनाय विनाय

1120 विनाय विनाय विनाय विनाय विनाय विनाय

1150 विनाय विनाय विनाय विनाय विनाय विनाय

विनाय = विनाय

1150 विनाय विनाय विनाय

1150 विनाय विनाय विनाय

विनाय = विनाय - विनाय-विनाय

विनाय विनाय

विनाय विनाय विनाय विनाय विनाय विनाय

विनाय = विनाय - विनाय-विनाय

विनाय विनाय

विनाय विनाय विनाय विनाय विनाय

विनाय विनाय विनाय विनाय विनाय विनाय

विनाय-विनाय-विनाय-विनाय-विनाय-विनाय

विनाय-विनाय-विनाय

विनाय विनाय विनाय विनाय विनाय विनाय

विनाय

लिंग

Alluvial Aquifer Sampling

41

- 12/16/89 8:30 ARRIVE AT HANKINS PROPERTY
DAN DRAKES DOGS
- 9:00 BEGIN PURGING - AA-GHL-S3-50-54 FT
PID = 0.0 ppm BREATHING ZONE
4gas = NORMAL
- 1100 Begin Sampling
PID = 0.0 ppm BREATHING ZONE
4gas Normal
- 1130 FINISH SAMPLING
- 1135 LUNCH
- 1230 DAN DE IPS DECONS ROO AND DRIVES BACK DOWN
TO 64 FT
- 1300 BEGIN PURGING AA-GHL-S3-60-60 FT
PID = 0.0 ppm - BREATHING ZONE
4gas = NORMAL
- 1500 BEGIN SAMPLING AA-GHL-S3-10-10 FT
PID = 0.0 ppm - BREATHING ZONE
4gas NETER
AFTER DID EQUIPMENT BREAKDOWN - THE
DEIN OF IPS PIGELED OUT OF AA-GHL-S3-60-60 FT
1630 LEFT SITE & DUMPED WASTE @ ~~JUDGE~~ JUDGE
1700 ARRIVED BACK TO WRAP UP DAY AT SITE R.

THE ENTIRE ST. 2 30031 115 6000 5000

Hollowed Honeycomb

12/17/11 Doser Turner

85 Below Pore - Breathing zone

85 AA-AA-S3-ZO-ZO

85 Below Pore - Breathing zone

30 REVERSE @ THAKKINS PROPERTY DRIVE DOWN

1000 BEGIN TRAILING

PID = 0.0 ppm

4SPS = NORMAL

1200 SUMMERS AA-GAL-S3-90-944+

4SPS = NORMAL

PID = 0.0 ppm

1000 BEGIN TRAILING

to 944+

12/20/94 DANE THOMPSON

beginning when we turned

12/24/98 DAREN THOMPSON - S-3-110-1144-3
895 ABOVE @ LHM/LIN'S DRUGSTORE
915 BELOW 3 UNDERNEATH AA-64-53-110-1144-3
895 DRIVE BOYS TO HIGH - S-3-110-1144-3
915 DAREN SIMONE DRAGEL - S-3-110-1144-3 ALSO
895 DAREN SIMONE DRAGEL - S-3-110-1144-3
915 DAREN'S SPILT
895 DAREN DRUGSTORE S-3-110-1144-3
1290 CLOTHES SAMPLE AA-CUL-33-NMO-HH44-3
1290 CLOTHES SAMPLE AA-CUL-33-NMO-HH44-3
1300 ELVIS(RED) SAMPLE 4820-2821-3
1300 LEFT EAR-LVNC4 35-250-3100
1400 DRUGSTORE BACK & DRIVE BOYS FOR THE SAME
1400 WE ARE NOT POWER TO HIGH AND HAD TO BE DRUNK.
1415 THIS IS TO CLOSE TO THE CAR SAME
895 SO WE WILL NOT SAMPLE. - 300-6-019
1420 82611 ALTAIRINE LHM/LIN'S DRUGSTORE
1430 FINISH SITE BLDG LEAVE FIVE TIRE DOTS TURNED OUT

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED

1597 - Tardigrade - 1830, (8gml)
1600 - Tardigrade - 56.9
1600 - Corgo - 770
PH - 7.87
1609 - Tardigrade - 20.3
1615 Lesser sandpiper (adult) from
1615 Barn Swallow
1645-1710) died & small Tardigrade could not
1700-1830 post sandpiper

1130 p.d.-o.c. #A117-A.0.39 480-1000
1145 id - C C K111-11137, 480-1000
1150 down to 60, 826 - well left off 700
1155 down to 60, 826 - well left off 700
1160 120-120, 120-120, 480-1000
1170 - about same 19.624.766
1175 - about same 19.624.766
1180 - about same 19.624.766
1185 id - C C K111-11137, 480-1000
1190 - about same 19.624.766

01-01-00 ~~Buttgemoed sand~~ & ~~Wetzel's sandy soil~~
070-100 ad. of R collecting specimens
1000-1125 soft + slightly moist
1000-1125 soft + 0.5 ft surface soil
1125 samples (1400) & 3-6 ft sand samples (1115)
1125 boggy limestone to 60'

background soil + water sampling

01-25-00

0700 at site K

0700 - 0815 prep for day + safety meeting

0825 at E220

0830 - pid - 0.0

0845 - pid - 0.0

0900 pid - 0.0

0903 - $\Delta \approx 19.6$ FT BEG

will blow w/ Nitrogen

1015 pumping started, dark muddy gray brown

1109 - still a muddy gray brown, Heavy silt load

0200 - still muddy, periodic output,

may required more nitrogen; forwarded
and reversed pumping direction to clear
line of sand. by 1313 was pumping better
will have to change sample times

1330 start collecting samples

1500 hr site 150 get gas in vehicle

go to Judith Lane

get generator started but pump wouldn't
work, emptied as much as I could with
buckets

tech to generator is present

01-26-00

0800-0815 site R, sample prep

0815 travel to EE cut- Sub, S of Ball Drained

0838 collect surface soil sample, large blocks

0940 - collect 3-6 foot sample

0955 - start going down to 100 feet

1005- pld - 0.0

1020 pld - 0.0, warming up break

1100 pld 0.0

1107 - down to TD of 101 FT BEG

D 18.8

1254 D 11.6, sed - 91.6

1300-1600 attempted purifying, could get
idioty to articulate but would not purify
out

1600 hr site

varaywana down river sampling

01-27-02

0700-0930 prep for sampling, safety
meeting collect BS & EG 108 - 0.5 FT - EG
by fit on the ice in trailer

0940 arrive at EE04 - Sub
D - 8.90 ft B&G

0955 - passing very low flow, a muddy
gray brown

1100 - continuing to pump, remains a
muddy gray brown, a lot of salt
& dry

1140 - 23 gal pumped, Turbidity 204 NTU

1200 - ~6 gal pumped Turbidity 30 NTU
Temp 59.9

Cond 66.5

pH 7.03

1215-1250 collect sample & duplicate

1250-1300 pickup

1300 - ~~extract~~ extract & dry samples
check figures for Tern

1330-1430

1430 - begin pulling rods for layout sheet with
Kubay

1510 drive to Keeley, EFG-108

1535 0.5 FT Sample collected

1555 - go down to collect 3-6 samples

Eric Keeley west a split

1557 - pid 0.0

1630 - pid 0.0

1700 - samples collection completed

1700-1800 prep samples for shipment

153-1700 poor surface of stony ground
at first hill road

522-153 e. example to 31st ~~gullies~~ ~~valley~~ to N.E.

Temp - 58.4

Cloud - 720

1450 RH - 0.95

225 - turbidity, clarity, 9NTU

1800 turbidity, clarity, 4NTU, 0.0

1130 turbidity, clarity, 11NTU, 0.0

1112 - turbidity, clarity, 6NTU, 0.0

1030 - better passing, turbidity good brown < 100 NTU

622. colour uniform though

1000 - 2 23.0 FT BEG

0945 - Pid. 0.0

0930 - Pid. 0.0

- Pid.

01.11 - 35 ft

0915 - begin colouring 100 FT 15 BEG

0900 62-108 R lot EEE-108

waterf 116-116-E-E-105-60 FT-EE

0700 - 0900 light blue, surface moving over

01.25-25

1000 ft down our water company

1-31-07

0700-0840 prepare for sampling & safety meeting

0840-0850 - get gas

0850 - start advancing to 100 ft

0855 end - 2.1

0910 - down to 101 ' 1"

D 15.46 before pressuring (0915)

I 16.26 after ~~pressuring~~ pressuring (0927)

D 16.47 (0937)

1010 - purging began. started out muddy gray

1020 - Turbidity - 90 NTU

1040 - Turbidity - 134 NTU p.d - 0.0

1100 - Turbidity - 200 NTU

1140 - Turbidity - 172 NTU p.d 0.0

1200 - Turbidity 180 NTU

1210 Turbidity - 170 NTU

pH 6.85

Temp 58.3°F

Cess 793

1215 start collecting samples

1245 samples collected

1245-1330 pull rods, fill hole with
bentonite chips, restore surface

1330-1415 Lurel

1415-1500 empty water and PPE wastes, taking
at Fresh Air Lane

1500-1530 empty truck

1530-1600 purchase supplies

1600-1730 package samples

SW-FLC-LIS

SW-FDC-LIS

1305

1345

SOUTH AFRICA

SW-FDC-LIS

1305

1345

SW-FDC-LIS

1305

1345

SOUTH AFRICA

SW-FDC-LIS

~ 10 ft 6" This wall is
concrete. This wall is
speciated to have full from the lower
depths.

~ 5 bgs.
Debris approaches to 60' from just below surface

133 - Metal frame pipe ~ 3 bgs
Also Encountered Rebar & concrete slab 3' x 3' x 4"
C initial start point C French trench
- Encountered concrete block 4' x 4' x 4' in size

135 Shattered framing C initial trench (French #1)

136 Level C.
133 MLE, DEH, & Heavy traffic personnel down
135 Arrived back on-site from Lure
Sunny ~ 35°C

13 To a trenching site 066 set down zone.
And C-ho-kia, Pierre arrive on-site. Heavy traffic equipment
1040 DEH, NET, CAK, MLE (066), Heavy traffic persons,
team ready (solution),

13 . Monitoring equipment (4-G, PID)
. Deco equipment (personnel, equipment, deco) equipment
. Level BSC on-hand
Equipment. Trace hole w/ 20' dig depth + 40" bucket
02108/0c Site N Boundary Test + Trenching
Cloudy

Site N, Boundary Leat trenching

33

under fill it appears that the soil
is fine grain sandy material

132 Eric Kemper arrived on-site

Crushed metal drum observed
~ 5 ft bg No markings on drum

1330 Photo 1 - Ground water on bottom
of North Trench

~~Trench Depth~~ ~ 11.7~~ft~~ ft depth to saturated sand

Wood observed @ ~4ft

335 Photo 2 - Photo of North trench.
Facing South

1337 Photo 3 & 4 Photo of west wall of
North trench. Facing South

Photos 2, & 3 & 4 taken before
proceeding north w/ trenching

138 Photo ~~4~~ 5 - Photo of soil/debris
pile

Photo 6 - Photo of crushed drum
in soil pile

340 TPT (obj) arrived on-site

1342 Extended trench further north. 16
fill observed un-form sand from
surface to 11 ft bg

1555 Headings began backlings North France
1555 Headings moved to West Trench (Trench 3)
1555 Their large started trenching at West trench
1555 Appears to be native soil used Illinois
1555 EPA on-site.
1556 Ditch cleared ~24 ft 69
1556 More banks observe between surface and
1556 Lines at surface
1556 Depth of bank between 1x3 x 4' second E ~
1556 Poles observed ~ 5 ft 69
1556 Poles & flags between 24 ft 69 & 4 ft 69
1556 Observed 1x3 x 4' second E
1556 5 ft 69
1556 5 ft 69
1556 Depth here is 20 ft
1556 Attempting to go to ground surface. The center
1556 S. Illinois compressions.

French Jam 3,8" wide @ width end [part
long, " e widest point

PII Modified Values Are in Dots
and draw lines. Readings were 0.06

With ~~q~~^q view of the racing action

Plate 8 - Nodularia must produce a lot of waste.

1343 **Play 7** - **Additional news + position of + recall**

What is Non-Binary Text Translating

+ penins to f. ill boundary

12, 6" few west end of

H + wide e west end (arrows + pen)

15 + wide e widths + points

15.2 + deep

Tower Dm 26 + long

16.25 Hect + large sheltered backfillings behind

16.20 PID Readings on several areas of f. ill/soil like we see open

(Ma fauna)

Alluvial soil f. ill

Shallow differentiation of

F. ill material in sidewall

Photo 16 southw. of tower

= 15.2 + of surface + f. ill

Photo 15 GW in tower

0.11 d f. ill material

characteristic of alluvium

flooding natural. Shows

Photo 14 Picture of tower well

Photo 13

depth tower - 3.5 + well 11 - flooding +

Photo 12 Tower - flooding etc { material

Photo 11 Tower - flooding etc { material

bottom surface d = 5 ft 6"

1000' distance 500' & blocks observed

500' N Boundary Test Traversing

1715 Herdsmen finished building West Ranch
Demobilizing Platanning to leave site

1730 Leaving site

1800 2/8/00
Mr. House

Sunny
~36°F

02/09/00 Site IV - Boundary Trench Testing

SAME equipment used as 02/08/00

0810 DEH, NEJ, CAK, mca (086) & Heritage personnel
arrive assiste

0815 Setting up decom zone. Heritage personnel
cleaning brush away from South Trench (Trench 3)
area.

0830 NEJ leaves site

0835 Entered exclusion zone of South Trench.
Started trenching

Preest Bricks observed ~0.5 ft bg
Concrete Slabs 5' x 2' x 6" } observed
3' x 2' x 6" } ~0.5 ft bg +
~1 ft bg

Native soil appears to be approximately
~2 ft bg. Soil appears to be
Sandy. Fill soil darker in color

0952 Continuing to excavate South Trench
Side walls continue to collapse.
Encountered few human side walls collapsed.
Started excavating further north.
Heritage place excavated soils from
North end of trench into
South end of trench, continuing to
excavate to upper ground water depth

1025 Excavating further South
Rebar, wood, pipes, railroad ties
observed @ Southern end of trench
~2 to 3 ft bg

area N Boundary Test Excavating

1030 " ^{undetermined} Railroad ties observed C n 4 ft by

1:35 Railroad ties observed C n 4 ft by
Grey Soil observed below at 6 ft

Structural concrete slab (3' x 1') wood
old pipes observed C ~7 ft by
~~F. II~~ F. II appears to go from surface to ~9 ft by ^{cutting} trench 11:

1045 GW encountered @ South end of trench
tremie. Appears to be ~~poor~~ poor ground water 12

GW C ~~tremie~~ by
11' 6"

1050 Photo 17 Fill material & GW

in North end of trench

Photo 18 View of length of
trench. Facing north.

Photo 19 View of North end (east end)
of trench. Fill &
GW observed. Facing North

Photo 20 View of center of
trench (east wall)

Photo 21 View of east soil pile
from trench.

Trench dem 52ft Long

16 ft wide @ widest point

F. II boundary 42 ft from
South end of trench.

SITE IV HORNSEY TRENCHING

00

1100 PID Readings on materials (6 areas)
in soil pile, soil pile, excavation
PID = 0.0 ppm

1105 Heritage beginning to backfill trench. Cleaned up
& Moved equipment to EAST Trench Area

1130 Setting up decon Areas for EAST Trench.

1200 DEH to stay on-site to watch Heritage finish backfilling.
CAK & MLC to leave for Lunch.

1245 Heritage finishes back filling trench 3 (E.S. trench)

1305 CAK & MLC back on-site.

1330 Heritage started excavating East Trench (Trench 4)
BRICKS observed @ ~0.5 ft bg. Small
pieces of concrete also observed @ this
depth.

More BRICKS + small pieces of metal
observed @ ~1 ft bg.

1335 Barbed wire ~~observed~~ @ ~2 ft bg

1340 & Plastic bag observed @ ~3 ft bg

1345 Rebar observed @ ~4 ft bg
Eric Kemper, Mike McAtee, Tim
Gougen arrived on-site.

1400 Went down to approximate Gw
depth. Due to sidewall collapsing
Heritage moved further west in trench
And placed soil from west end

Photo 36

water

(e) west end, Gown

Photo 33 (a) Bottom of trench

Photo 31 H

F. II boundary from ~~west~~ edge of

Width = widest: 18 ft

Length: 34 ft

Front door

Depth of saturated soil: 13, 6, 11, 6 ft

Saturated soil

end of trench

Photo 22 Photo of base blues +

1400 Saturated soil

1300 Old flags observe ~ 6 ft 6 in

Wood observed ~ 5 ft 6 in

1410 Visters left site.

1420 Apparent nature soil.

F. II soil darker color is lighter

1405 Inner base observe ~ 5 ft 6 in

of trench: up east end of trench.

and 11 remaining out trench

Site N Boundary Wall trenching 41

Photo 26 Soil pile

Photo 27 View of trench (from above)

Photo 28 ~~no~~ view of South
wall of trench

1455 PID of several places of soil
pile, ~~&~~ excavation, & Debris
PID = 0.0

1500 Heritage starting to backfill excavation.

1615 CAK + MLR leave site for the day

1620 Heritage completes back filling of trench

1630 Heritage leaves Site N for the day. NEJ
arrived on-site, left with DEH.

M. Bruce
02/09/00 1715

~50°F Cloudy

2-10-00

Site N Interior Trenching

Equipment: Same as 2/8 and 2/9
w/ exception of Bobcat with
digger man & attachment will
also be used. (~~Bobcat @ Judith~~
~~Site~~)

Based on previous
Interior Trenching location information.
to the USEPA designee at the
preliminary inspection meeting on 2/10/00,
the USEPA designee has provided
concurrence with Site N Interior Trench
location.

0915 CAK, mrc, ~~BOB~~ (BOB), Heritage personnel,
CAHOKIA POLICE ARRIVE ON-SITE

0925 DEH (BOB) ARRIVED ON-SITE. KIM PERRY
(SOLVIA) ALSO ARRIVED ON-SITE.

0930 BOB + HERITAGE MOBILIZING @ SITE

1010 HERITAGE BEGINS EXCAVATION OF INTERIOR
TRENCH.

Red Bricks, concrete slab @ surface. Rebar, plastic cap
~ 0.5 ft bg. Old piping, metal bumper
@ ~ 0.5 ft bg. Rags @ ~ 0.5 ft to ~ 1 ft
bg. Sheet metal, rebar @ ~ 1 ft bg
MOVED EXCAVATION ~~WEST~~ TO 3 FT WEST

Sheet metal, wood beams, concrete
slabs ~ 2 ft bg

PSD = 0.0 on surface debris
pile

69

observed e ~ 54.69

size of concrete ~ 6' x 6' x 1'

width across observed e 5 ft 69

3' x 3' x 6' size of concrete 10ft x 10ft

e ~ 3 ft 69

6 inch class 100 pipe (approx. 2 ft long)

Plastic sheathing e ~ 3 ft 69

Plastic old metal piping e ~ 2.5 ft 69
cathodic

soil pipe Debris observed.

Photo 34 Picture of steel excavation

pipe. (Metal, debris)

Photo 33 Picture of excavation soil

Photo 32 Picture of trench. Facing east

Photo 31 ~~Picture~~ Picture of surface soil pipe (soil)

Photo 30 Picture of trench. Facing south

object). Both end of trench

Photo 29 - Picture of debris (w/ after

face

Approximately 15 ft from south end of

of material observed e ~ 2 ft 69

Inclusion Angle 100, ~~Heavy~~ Heavy metallic piece

PID = 0.0

from several pieces of pipe

soil pipe from excavations PID Readings

XLT II Surveyor/Leveling

in excavation pit

Photo 37 damaged Rusted drum

(No Vis/ble markings)

Damaged Rusted drum

Locate e ~ 10 ft 6"

Pristic Sheeting

wood, thin concrete Slabs

markings Vis/ble, wood

- Rusty drum lid (No

Locate e ~ 8 ft 6"

North

Soil, pit. Fails

Locate e in excavation

Lid & slab of

Photo 36 Photo of Rusty drum

Rusty drum lid (No markings Vis/ble)

- Rusty S gal can, can with debris

Also locate e ~ 7 ft 6"

~ 7 ft 6"

Wood, scrap tires, scrap metal debris

Pit. Failing surface

~ excavation soil

: 546 sheet metal

iron pipe, concrete

Photo 35 Photo of 6" cast

Site A Interior Test Unit

1145 Above water level left side
This lamp + Mica Mafic Hornfels

Photo 39 Picture of ~~different~~ drum.

PPM downwind of material = 3 PPM (3 ft + away)

PPM above material = 870 ppm (spike)

Drum had white material inside

Worn edge ~ 11 ft long

Visible) excavations from

1146 Damaged rusted drum (do markings

drum

Photo of sand & ash
damaged

From trench

1147 Damaged rusted drum (do markings visible) excavated

1120 Stamped excavations signs

1110 DBE Heritage tool less break

Surface soil.

Photo of gun

GW encrusted C ~ 11 ft long

1144 Drum lid C ~ 10 to 12 ft long

Pieces of ceramic pipes observed - 10 to 12 ft

Same type of debris observed previously

C. t. tiles wood (unlabeled slabs, rubble pieces
scrap metal frags)

1145 W. hammering

~ 6 ft bg

1230 ~~Damaged~~ Puddled down absecon (do markings w/ 13 & 16) (2)

1235 Excavation moving up path

1230 Tim George + Mike McHale active back onsite

observed

metal cable, old piping, wood, plastic sheeting,

1245 Excavation moving north

6 ft bg

1245 Pipeline, rusted segments + of drum excavator

drum

Photo 42 Photo of active markings

(SPL)

1245 ~~Visible~~ PID from inside drum = 408 ppm
bg + ft bg

Drum excavated @ ~ 10 ft bg

1245 ~~Visible~~ PID on - plates of drum

drum = 384 ppm (spike - same markings)

1245 Piece of drum observe @ 5 ft bg

(do markings w/ 13 & 16)

Photo 43 Photo of cable

5 ft bg

~~Telephone pole~~

06 separated in excavation @ ~ 5 ft bg

large diameter cable A pulls

excavation moving north

and .., thinner smaller

Damaged,

1235 Rusted drum (^{no markings} No visible markings) & drum

I'd excavated. PID inside drum = 357 ppm
Photo 43 - Photo of drum

Telephone pole, metal cable, scrap metal,
plastic sheeting, tires

Damaged,

Rusted drum (No markings visible) excavated

white material (pasty) PID inside
drum = 893 ppm

Photo 44 - Photo of drum

Damaged, Rusted drum (No markings visible)

excavated. White material inside

PID inside drum = 238 ppm

Photo 45 - Photo of drum

Photo 46 - Damaged ^{Rusted} drum PID = 115 ppm

1300 White material discharged from northwest corner of excavation. Appears to be similar to material in rusted drums
excavated. PID from excavation = 0.0 ppm

Damaged Rusted Drum was punctured (possibly by teeth of bucket)

Photo 47 Photo of punctured drum

white material & drum originally @ ~7 ft bg

1305 Stopped excavation of trench due time required to backfill, decon, & demolish from site.

Trench item: width ~8 ft

Depth ~ 11 ft

Length: 43 ft

- 1330 Herdlaug Shallow backfill trench
 1345 CAKE + MUD backfill to surface
 1350 Lichen Peaty (Sulphur) + Peat bottom (Mudrock)
 1430 A Prairie outcrop to discuss filling is a feature
 Various pieces of debris are scattered
- 174 Photo - View of excavation
 174 Facing west
 166 Photo 53 View of surface pile
 Facing west
- 191 Photo 51 View of wood charcoal
 191 Facing south
- 1 Photo 49 View of trench
 1 Notes
- 1 Photo 48 View of trench. Facings
- 1 ~~Wood charcoal~~
 1 Facings south
- 1 MVE - 005 S view of trench
- 1 USBR's charred : view of trench
 1 Facings north
- West N, around trenching

2/10/00 1745

M. - Home

Leaving Site.

1745 finished setting up S.I. + fencing.

1645 DEH + MIA Arrived back on site.

1645 DEH + MIA Arrived back on site.

Leave Home.

1610 Arrived at Site L. Heritage underway

do + site to next site.

1555 Heritage loadings track Home onto loader (in pairs)

1550 DEG leaving site.

1545 Heritage preparing to leave site.

1520 Cleaning up Visitation around site

1515 Stake out + search excavations

bulky - . possibly re-sealed.

1505 on clean floor would need to be

restoration is within DEG's scope of work.

to check if this magnitude of surface

Site N interface treatments. Kim wants DEG

options for debris left on surface of

1510 Kim Peary Ken Leftontry & DEH discuss

1505 Heritage debris deconcerning track Home

(as much as they could within debris on surface)

base, after excavation. Heritage finished excavations

Heritage unable to get all debris

Part A summary statement

1-11-00

Site L Interior Trench

Site L Interior Trench

(8820 Arrived on site - CBG, Heritage & Solotz)

Equipment same as 2/8

Based on previous submission of Site L
Interior Trenching Location information to
the USEPA designee & today's safety
meeting & yesterday's prep. inspection
meeting on 2/10/00, USEPA inspects
of Site L location.

0900 Heritage starting excavation

Small amount of bricks, rags, small pieces of
concrete observed @ 0.5 ft bg (west edge)

PID Readings on Surface site = 0.0 ppm

Wood, Truck tires + concrete slab ($3' \times 2' \times 6''$)
observed @ ~1 ft bg (west edge)
Another concrete slab ($\sim 3' \times 2' \times 6''$)
observed at ~1 ft bg

Small metal stamps, bricks, wood, wire,
truck tire, concrete, piece of sheet
metal observed @ ~3 ft bg (west edge
of trench)

Concrete slab ($3' \times 3' \times 6''$) located ~
~2 ft bg (center of trench)

Truck tires & concrete slabs observed
~2 to 3 ft bg (center of trench)

height of bucket.

down, may have bee. punctured by

bullet the hole subs + next hitting from

4th damage draw occurred at 5 ft - left

(at 2nd drawings 15.66 ft) See page 25

draw in French.

Photo of gun camera - Photo of

+ French

Photo 57 Photo of draw in

solid near draw) successive 25 to 50 ft

(Lubet says massive) Lubet

solid damage first draw

Photo 56 Photo of the

(highs + lows)

Photo 55 (solid) 1st

was seen C to S to L & by

A second damage, massive draw = 40 ppm

(solid) (solid) massive draw (solid)

Photo 55 Photo of the

bq

Draw was massive ~ 5 to 6

11 ppm (highs + lows)

Photo 12nd 1st massive draw =

bullet stem solid massive draw

(bullet) bus + massive with

Draw (no markings visible) is

27 ppm (highs + lows)

material in + Photo 1st massive

bullet massive + massive porous

C ~ 5 to 5 (was edge to edge)

This place of scarp metal to base

After 1st removal layer

--
Site L, Anterior trenching

~~5th drum~~ A 5th drum (^{damaged} appears to be
^{Sierra} - intact)

Photo w/ canon camera - Photo of
3 drums in excavation.

Photo with Canon camera - Photo
of black ~~tar~~ tar-like
substance coming from drum
with Monsanto label.

→ Upon further inspection - ^{of drums at ~5 to ~6 ft b.g.}
~~Two~~ drums have Monsanto labels on
them. The third drum has an
M on the label that is similar
to other drums which have the
Monsanto label on them

- 2 Photos w/ canon camera - Photos
of drums facing south. Photos
show labeling.

0445 Tim Guyen & Mike McAttee on-site

1000 Tim Guyen left site

(612a)
A damaged, pushed drum was
observed c. ~6 ft b.g. (center of
trench). Black tar-like substance
is leaking from drum.

On 7th drums (damaged), please see
c. ~6 ft b.g.

Photos of Div. A/C 15 ft. 9 in. 5-10-74

Photos of W. A/C 2nd Cam - Labels =

Labels with Measurement Labels

to have labels similar to others

Labels on A/C 15 ft. 9 in. appear

11.10 Standard tracking signs

10.45 DB6 & HPA + 3e foot wall-bar

obligatory E same location

14th & 15th drums (damaged)

of truck), Photo to W. A/C 2nd Cam - E

observers ~ 3 to 4 ft. bg (etc etc)

12th & 13th drums (damaged)

drum

Photo with Cam - Photo of 11th

11th drum (damaged), No less than 2nd observers

+ to be tracking from drum

13th truck - L. to substance, appears

+ to be tracking) observers ~ 6 ft bg

9th & 10th drums (damaged & appear

damaged

+ to other drums with measurement labels.

Labels on 8th drum less similar

appearances more

of drums

2 Photos of W. A/C 2nd Cam - Labels

drums (value of travel)

Photo W. A/C 2nd Cam - Photo of groups of

2nd - 1st floor

Site L Antelope Branching

then photo of dam is facing north

Dam 15 observed to
have broken fluviorite material
breaking from it.

Photo taken of vulture sitting

16th dam - Damaged - Mansandite
label observer. at Dam 13

C ~ 4 to 5 ft by

Photo taken of dam with
labeled

Wood and concrete observed C

- 3 to 4 ft by (rest section
of R. French)

17th dam (damaged) observer
C ~ 4 ft to 5 ft by (rest
section of French)

Photo S8 - Photo of

Dam 17

18th dam - Stuck in south side
wall (rest section of French)
observed C ~ 4 ft by:

white solid m cement near dam

Dam pulled out of sidewall

Label up on dam appears
to be similar to the one above
intervis on other dams expected

1320 Heritage fine brick wall excavation.
300. Call of MR. back on site
1332 Call of MR. leave site for lunch

1222 Heritage started backfilling trench.

25
1216. Excavations depthened
(1) Depth of drums /excavations

1216. Excavations southwesterly

5 Depth of drums /excavations

of trench

1216 Up the east end

4 Photo of drums excavated at

3 west side view of trench

Buried in sidewall,

2 South sidewall, drums

of excavation

(1) South sidewall & west end

1215 Photo from camera camera:

Depth ~ 8 ft

width: 10 ft

Trench Drum: length: 30 ft

the south side well.

Additional drums may be buried in

5 m drum is

Photo width same camera: photo of the 50

at L-shaped trenching



319.

320.

321.

322.

323.

324.

1550 01/11/00

M. House

- 1550 Heaving downing took here
1550 Heaving downing took here
1550 Heaving downing took here
1550 Moved to Site C. Heaving left site
1550 Laid out trenching surfaces for Site B.
1550 Laid out trenching surfaces for Site B.
1550 Left site.

box → unsorted Trenching

✓

our position
to search

Usually / cool = 25°

SITE G - interior Trench

Site G
J-14-00

wind | Equipment used: 1) Back hoe w/ 20' dig depth + 40" bucket 2) man
1900 - arrive onsite (in trailer) 3) Power equipment for PPE 4) Monitoring equipment (monitor, 4-6)

Based on previous submission of site G interior trenching location info.

to the USEPA during the safety meeting and also based on the preliminary

inspection meeting for this backhoe, USEPA concerns w/ site G involve

~~the presence of debris in the interior trenching location in the vicinity of the safety~~
~~meeting just before preparation meeting on 2-11-00 was shared with Site G location.~~

C-10 Heritage #1 - excavation. clay top layer ~ 4-5 ft thick.

~ 5 ft of material composed of brick, & pottery.

app ~ 5 ft of large metal objects extracted (2)

~ 6 ft a segment of metal pipe is recovered, pieces of
plastic, rubber, and glass are present @ this depth (and increase
from this depth), as well as rags, cloth, metal strands, length of
here. This material is concentrated on the East side of the
trench.

100' trench removed to 5-6 ft bg from East wall of trench.
condition of drums are mostly solid, some red bottom ~~bottom~~.
one not inverted, no apparent leak, no apparent contents
100' drum #2 removed (~ 6-6.5 ft bg from West side of the 17 ft
trench, top of drum is broken as in bottom of, solid material
still in bottom of drum, steel lining material present believed
to be corrugated paper.

Photo C-1 was of drum #1, Photo C-2 was of drum #2

1012 Two excavated from ~ 9-10 ft bg
1014 Drum #3 removed (~ 10-11 ft bg appears to be in one piece,
nothing leaking, no visible leak, lid off, solid material
visible. Photo C-3 taken of this drum (#3)

1018 Large concrete slab uncovered from 12-14 ft bg drum
#4 removed at this depth, this drum when unrolled expand
it smoke the smoke was not heavy and was grey/blue in color
Drum was fairly intact and material was ceramic soil dense
or dried from inside the drum and air from the surface to the
drum after it was unrolled see: Photo C-4 taken of drum 4 and
C-5 also taken when drum was rolled over + 6-6

DATE AND OWNER INFORMATION

- 10/31 Toty is used in a maneuvered drum #5 - 12 ft long
little drum #4 (slightly "overhang" drum) was pushed into a
hole within the trench for West side, and when the material
was cut it began to move & had decided to move the
drum around esp. at digging depth #17 ft stuck bottom of trench
plastic excavated, metal strips, rubble & a lot of glass
glass finds consisted of glass chips, as well as numerous pieces
of discarded metal (a ~14 ft piece of wire pulled through
that had ligated drinking fountain and then arranged
so that pipe exploded here (alarm))
- 11/13 Trench is advanced east board #5 is lowered having
come from a depth of ~14 ft by over 10' section of trench
drum is intact, raising it, but the visible markings
111C 67H / NC is back on track to return up, Heritage able to break
11/31 Within trench successfully moved east side of trench.
- Photo 67 taken of drum #5 Plastic and rubble removed
from 12-14 ft. Photo 68 taken of drum #5 to show distance
as indicated
- 1142 Large quantities of charred wood unearthed from 14 ft to 6 ft
1143 Standardized excavation: 17 ft by about metal and
a yellow/greenish substance consisting some rocks and
one found at this depth
- 1144 Trench is cleared toward the East lot of material obtained
from here #5 & #6 by the action of material riding and float,
content listed above.
- 1154 drum #6 unearthened from #7 feet long, drum is crushed
and has not an oil photo 69 taken of drum #6
1201 Trench extended eastward
- 1245 drum discovered on surface pile #7 it is not intact,
crushed
- Photo 690 taken of drum #7
- Photo 691 taken of drum found on surface pile No 134
1215
- 154.

1220 Patrick drum excavated from ~15' & by crushed
and containing no material

Photo 612 taken; fragment of drum found on refuse pile
123 after dive - on Trench is again moved to its East boundary
and excavation is resumed until steps measured to ~5 ft. long

1235 Drum #8 is discovered in a depth of ~13' by

Photo 613 taken of drum #8. Photo 613 taken of drum #8
drum #8 is believed to contain a solid material, this photo
was taken standing above drum #8.

1242 Drums #9 & #10 unearthed from ~13' by both contained a
solid material since the drums are split in half, the other is in its
entirety undisturbed

Photo 615 taken of drums #9 & #10. Photo 616 taken standing
above drums in the NE corner of the trench

Even if these drums contained a bright orange or solid material

1250 Photo 617 taken of drum #11 it was intact and contained a
solid material

Photo 618 taken of bottom of hole = ~17' & by

1311 Record of western edge of Trench = 16' 8"

Record of eastern edge of Trench = 14' E 6' W 6' 8"

Record of western edge = 16' 5"

Trench length - 40'

Photo 619 is of the South and East sections of the trench

Photo 620 = NE section of the trench

621 = N side of pile

622 = S facing side of refuse pile

623 = taken bottom of trench, river in front

624 = N facing bottom of trench to ground water

625 = N. facing side of surface soil pile

1325 7325: Heritage began backfilling.

W.W.

10 ~~DEH~~, NEI go to lunch, ~~DEH~~ stays onsite w/ Heritage

1715 return from lunch

1545 Heritage leaves site for day, 136 marks transcribed
leaves 161 day.

3-15-00 Site G - South Boundary trenching See ~~next~~
EPA Statement (2 end of notes - on top of next page)
40" bucket

Equipment used: 1) Track hoe with 20' dig depth 2) wash
trailer 3) Decon equipment - for PPE 4) Monitoring equipment (dust meter,
PID, 4-gas) RCV, DEH, MW - units for site best blessings?

Tim Delle onsite for Heritage

8:45 arrive onsite to find last access route to boundary trench

(2) site G doce. and exclusion zones are set-up

9:15 Heritage begins to clear area to excavate trench @ site G

9:40 Heritage begins trenching Eric Kenyon comes onsite (9:15) then
leaves to retrieve safety gear to enter the exclusion zone

9:50 material recovered has been uniform (composed of sand)
problems with trench caving in @ SBT 2

Photo SGG #1 taken (with HP) of trench.

Photo SGG #2 taken of bucket with saturated sands in it

SGG #3 taken of ground water seeping from bucket.

SGG #4 stood on SE corner of trench looking into trench.

SGG #5 - stood on SW corner of trench looking into trench.

SGG #6 - stood N end of trench looking into trench.

10:07 due to trench caving distance to ground water difficult to
ascertain, believed to be 15-20 ft. according to the length of the
tree-trunk arm No fill encountered to ground water depth

Trench is 9' wide as an average and 17' long

10:10 Trench will be filled and excavator moved to the North.

10:15 Heritage begins backfilling trench SBT 2.

10:20 began to excavate SBT #3 - surface material is similar
to that of SBT #2.

11:00 fill encountered @ ~ 3' - brick, clay pipe, metal shards, This
fill zone was ~ 4' deep then a grey clay like soil was
encountered until the groundwater was reached. This fill zone
was to the Northern end of the trench where it adjoins the first
south boundary trench dug @ site G

11:30 problems with trench SBT #3 caving in due to its sandy soil
composition.

photo SGG #7 - taken of N. side of hole from S. side of hole showing
depth to groundwater @ 14' 2" + 63

- 1134 Photo S8G #8 taken at NE side of base of chimney face
 " S8G #19 taken at NE chimney face
 " S8G #10 taken at S side of chimney face
 " S8G #11 taken at NW corner of chimney
 S8G #11 chimney made of brick
 NW corner of chimney is 2.8" from the old face (temporary section)
 1136 Building stepped back building
 S8G #12 taken at E. facing side of future pile following a surface
 around of step model both sides of chimney pile were removed
 many little tiles all around from the chimney side
 1145 Design backfilling.
 1203 Full sounding = ~3, from flute end of SPT #3
 1245 Herringbone course tiles built facing and decorations decorated with
 1315 NEI + CMU - column PD leaves S1eH much
 1320 Herringbone leaves S1eH for lunch, DEH leaves S1eH also
 1345 DEH returns to S1eH w/ lunch : Call for PD dimensions S1eH 1350
 1400 Herringbone remains to S1eH after lunch, stages over past drums
 near entrance of S1eH, columns blocks of excavator
 1430 NEI + CMU arms to S1eH, DEH moves to S1eH
 1435 DEH setting up the clusters some square 1m. thick
 1445 Louvers w/ four parts or "snow fence"
 1450 Herringbone leaves have to S1eH, Call for PD also
 move to S1eH ; Herringbone columns of chimney
 after first have moved over it
 1455 Herringbone leaves for the day
 1465 E. Louver arms on S1eH
 1475 AB6 oven plates S1eH etc. some set-up : move to S1eG
 1485 Herringbone leaves for the day
 1495 NEI + CMU corners with S1eG same boundary trench location
 1500 Herringbone masonry techniques OT

~~Based on previous submission of SITE H interior trenching 02-16-00 location to the USEPA designee, and the preparatory inspection~~
 BAT meeting for this task, USEPA concurs w/ Site H location.

Equipment: 1) Track hoe w/ 40" bucket/ 20' dig depth 2) wash trailer
 3) Decon equipment - per PPE 4) Monitoring equipment (PIP, 4-gas, dust-trac).

0840 NEJ, DEH, CMW representing OBG onsite, T-T and K-P arrive
 Heritage is laying out plastic.

0900 CJB begins clean area placement, and sets up with ~~level C~~ PPE

0905 Heritage begins trenching @ SITE H. brick is exposed after 1st swipe from track-hoe ~ 1.5' down, very dark soil

0945 E Kemper arrives on site

0945 metal fragment uncovered @ ~ 4' down either a bottom wa
 lid of a drum recovered no visible markings

0924 Fragments of a drum recovered from ~ 6' down in mangled
 pieces of metal

0926 Pieces of lead and concrete unearthed along with half a
 mangled drum

0930 H1 - photo taken of half a drum and its contents (solid) excavated
 from a depth of ~ 6'. Redrum seems to have been painted green

H2 - photo taken of the piece of drum found (w/ 0926 laying of
 refuse pile)

0934 E Kemper comes into excavation area with CJB; Heritage

0935 lots of wood being uncovered from a depth of ~ 6.5' obs. glass

0945 drum lid uncovered along with brick, glass, and wood

H-3 - drum lid photo taken - same lid E Kemper took picture
 of. CJB took the picture on the refuse pile, E.K. took it in the
 hole

0951 lots of brick and wood unearthed from ~ 12' down, also lots
 of metal wire

1000 2" metal pipe size 4' long recovered. Investigation of refuse pile
 shows scrap metal of various kinds: 1) pipe 2) angle iron 3) wire
 4) strings 5) frames etc...

1005 H-4 photo taken of bottom of trench and of groundwater.

2-16-00

1005 - 12' to groundwater. Trench will be moved East. @ a depth of 12' vertical pieces of cuitixi that looked as if they were straight were excavated.

1020 5' down of East portion of trenching strands of metal were recovered glass bottle found in refuse heap (not good liquid waste purity, see lunch, St. Louis, Mo.)

1126 Photo H-5 taken of glass bottle

1030 S Kemper beams exclusive were. Piece of drum found in sidewalk no apparent markings, drum had discarded in refuse pile (no spans markings)

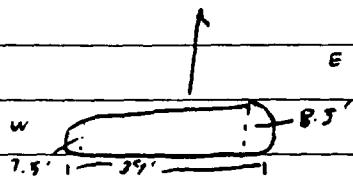
1046 Extending Trench to the East, ~~but it is not through the sidewalk~~
copper metal recovered from ~1' down.

1100 Large block of concrete recovered w/ ribs in it. Metal discovered on refuse pile consists of drums lid, tin cans etc. Larger amounts of metal recovered @ ~11' such as angle, iron, wiring, sheets of metal etc.

1130 drum lid recovered from ~12' & trench depth = 12'

1135 See next page

1140 Trench measurements taken



1145 St. Iber found on refuse pile of site H Trench: words that could be read: from Hollee, Division C, Bureau Mo., St. Louis.

1146 68 4, M O'Neil, Dept. 57, Akron 8, OHIO, R 947

1205 Photos H-6+7 taken of NE portion of trench

Photo H-8 taken of SE portion of trench

Photo H-9 taken of potential partial drum in sidewall

Photo H-10 taken of Northern wall of trench @ site H; also W. wall & bottom of the

Photo H-11 taken of NW corner.

Photo H-12 taken of E. facing side of refuse pile

Photo H-13 taken of S. facing side of pile.

Photo H-14 taken of SE corner of pile

1146 Photo H-15 taken of N side of pile

Photo H-16 taken of surface material soil site

2-16-00 Site H interior trenching

1210

15.

1135 Heritage stopped trenching went to lunch.

1210 DEH + NEJ leave exc. zone

1220 NEJ + CMW leave site for lunch

Heritage returns to site after lunch; TPT leaves site

1235 Heritage begins back filling trench

K. Perry leaves site, Cahokia PD leaves for lunch

1315 NEJ + CMW + Cahokia PD returns site

154

1320 NEJ + PEM re-enter exclusion zone while Heritage continues backfilling. Sift through literature found in refuse pile - will write in field notes ~~what~~ ^{82%} what the literature ~~says~~ ¹⁴⁰.

* Brass & Bronze forging digest - Published by Copper and Brass research association. VOL 3 NO 4 November 1949. ★ Monsanto supervisory manual - July 1 1945 - Charles Gellman ★ Kirkwood commutators manual - insulation and wires incorporated ★ insulation and wires incorporated inverse 10-21-49 ★ Bill of Lading the car - ferro paint and varnish company ★ Freight Bill from Conferro paint and varnish co. St. Louis Mo. shipping paint ★ Southwestern Bell phone book ^{Dec-1946} ★ Letters to conferro paint & varnish

Photos of Lit. Photo H-18 - Taken of Kirkwood commutators brochure

Photo H-19 - Brass brochure Photo H-20 Monsanto managerial

manual. Photo H-21 - S.W. Bell yellow pages 1948. Photo H-22 -

~~freight bill~~ car - ferro pe rco. Photo H-23 Bill of Lading car - ferro

H-24 - photo of Roblee shoe co.

H-25 - photo of all the lit. collected.

1410 NEJ, DEH exit exclusion zone after having photographed and documented literature found in trench.

Heritage finished with backfilling procedures and is in

1450 Heritage of decor; NEJ + DEH take down exc. zone, etc.

Leave site completes decor of track hoe, prepares to

for the day

Site H, Governor Remained

00

1525 Receive word from TPT (from K. Pomy) that Heritage can demob equip. + personnel, since Cero has no+ financed approval to trench on Site I

Heritage leaves for the day; someone from Heritage will return later to pick up the 8 remaining salvage drums. Heritage could not take today; the drums are staged at Site G; the track hoe will be picked up from Site H on 17FEB00.

Cahokia PD leaves for the day also

DEH + NEJ continue to clean up trench site

1545 DEH + NEJ leave site to bring supplies to field office; will return to pick up remaining plastic, fencing, + fence posts

DEH collimated the Hg lines (resonance / pump / A)

QAL scanned through lines carefully. The tester was calibrated to 82 $\mu\text{s/cm}$ at 75.20F.

DEH then checked the conductivity of 4 different bottles

of DI water supplied by Suresh & Lobs. All 4

bottles were apparently unopened prior to cleaning the glass. The ESR to the come from a

different box.

In general, The conductivity of the DI water ranged from ~ 5.8 $\mu\text{s/cm}$ to ~ 9.3 $\mu\text{s/cm}$

~ 5.8 $\mu\text{s/cm}$
~ 6.1 $\mu\text{s/cm}$
~ 8.5 $\mu\text{s/cm}$
~ 8.2 - 8.3 $\mu\text{s/cm}$

The readings were as follows:

1 ungray numerous orange casing, site I 01

01 March 00 Site I

940 DEH + NEJ sitting at alluvial - aquifer casing
on Site I to pump out rotary mud from inner 4" casing;
picked up supplies & staged at casing, filled generator w/
gas, filled clean drums w/ water, etc before arriving

Setting up to pump water into bottom of casing to flush mud
out & collect mud.

~50°F, windy, sunny

D/D as cover removed = 0.7 ppm (peak)

PP directly over casing (at surface) = 0.0 ppm

Check casing depths w/ weighted tape.

thick material @ ~ 27-28' to ~ 37' (tape reversal)

material expected to be drilling mud, grout, or having
native sand

Water pumped from 3.55 gal drums into bottom of
casing; "bottom of casing" was 44-45' below grade,
where grout/cement was encountered - grout/cement
was observed on the bottom of the tremie tube (used
to advance flexible tubing to bottom of casing)

Drilling mud & fine sand was observed coming out
of the casing - the casing was flushed until the water
source was expended, at which time the flushed water
appeared to contain only water and some fine sand and
grout particles (mostly clear); the standing water in the
casing was then pumped out - the pumped water
also appeared to contain fine sand and grout particles, which
cleared significantly before the casing was completely pumped

1310 NEJ + DEH left Site I

pumped water was contained in drums

Blanks

1111

1111

* 102

Time - Project kick off @ 8:15

Objectives - interior trenching of SNE I - S-A trenches

Weather - Sun, wind, sporadic lightning, 55°

09

3-11-00

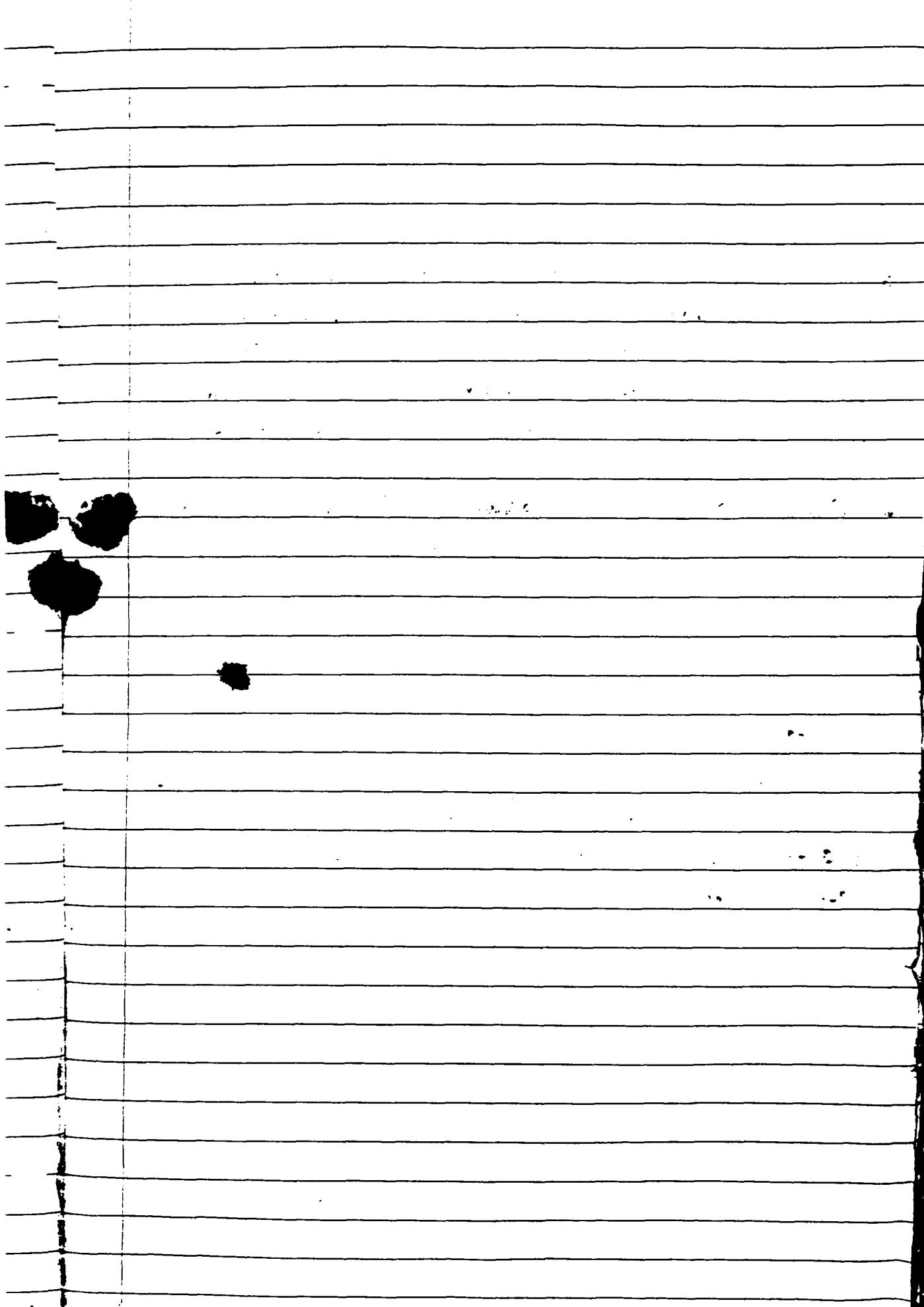
~~Based on direction received from USEPA the site T
interior trench location is appraised.~~

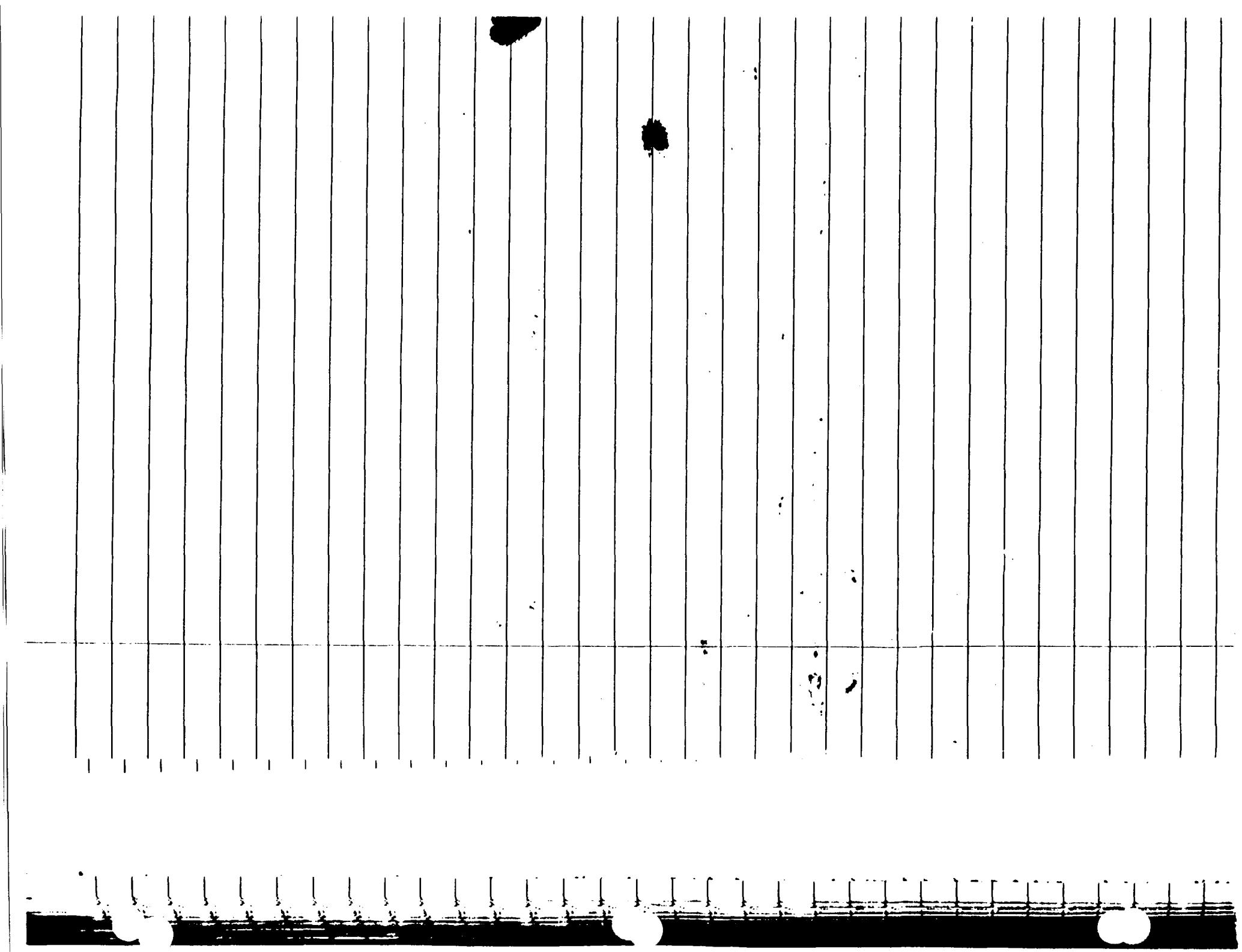
~~1345 began trenching at site T surface material
removed, thin layer of gravel at top ~3.5" deep, lay
sandy soil underneath to a depth of ~4.0'. Then ~4' of
fine black soil with bricks in it and wood. @ ~4' a
piece of 2" x 6" metal scrap was uncovered. A drum
is surrounded by ~4.0' down. It hasn't been determined
as to whether or not this is a drum. It was a drum.~~

~~Another drum is uncovered @ this depth of ~4.0' & lay~~

Re-done on pg. 95







1999 1000 1001

1002 1003 1004

1005 1006 1007

1008 1009 1010

1011 1012 1013

1014 1015 1016

1017 1018 1019

1020 1021 1022

1023 1024 1025

1026 1027 1028

1029 1030 1031

1032 1033 1034

1035 1036 1037

1038 1039 1040

1041 1042 1043

1044 1045 1046

1047 1048 1049

1050 1051 1052

1053 1054 1055

1056 1057 1058

1059 1060 1061

1062 1063 1064

1065 1066 1067

1068 1069 1070

1071 1072 1073

1074 1075 1076

Leucosia *leucostoma* *leucostoma* *leucostoma* *leucostoma* *leucostoma* *leucostoma*

卷之三

मृत्यु वा जीवन के दूर दूर हो जाएगी। - अब तक तो

—Digitized by srujanika@gmail.com

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କାନ୍ତିର ପାଦର ପାଦର ପାଦର ପାଦର

[A horizontal line with dark ink smudges at the top.]

१०८ राजा कर्ण के विरुद्ध युद्ध की विवरणों का विवरण

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וְיַעֲשֵׂה כָּל-מִזְבֵּחַ וְכָל-מִזְבֵּחַ

• (सामाजिक विभाग =)

संस्कृतानि विद्यन् विद्यन् विद्यन् विद्यन्

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2. Foreign sources outside.

of
etc

points. Therefore as mentioned before some countries
like U.S.A. etc. - the material is a collection
of the former and probably the country to
mention that we are still doing
etc. Below mentioned @ 21.5/- comes for

etc. the other part.

Below mentioned @ 21.5/- comes for
etc. the other part - finally what part
comes mentioned @ 21.5/- if applies to the

etc. the other part from the same person as the
etc. the other part as the other (say,).
etc. the other part as the other. (is not worth)
The mentioned amounts are added to 20
etc. little help. (consistency of E.I.I. duty).

etc. consistency of the bill (the given) to the
last duty. therefore specific consumption etc.
etc. - Half day. follows a bill duty @ 21 (3-11)

11-00

 11-00
5

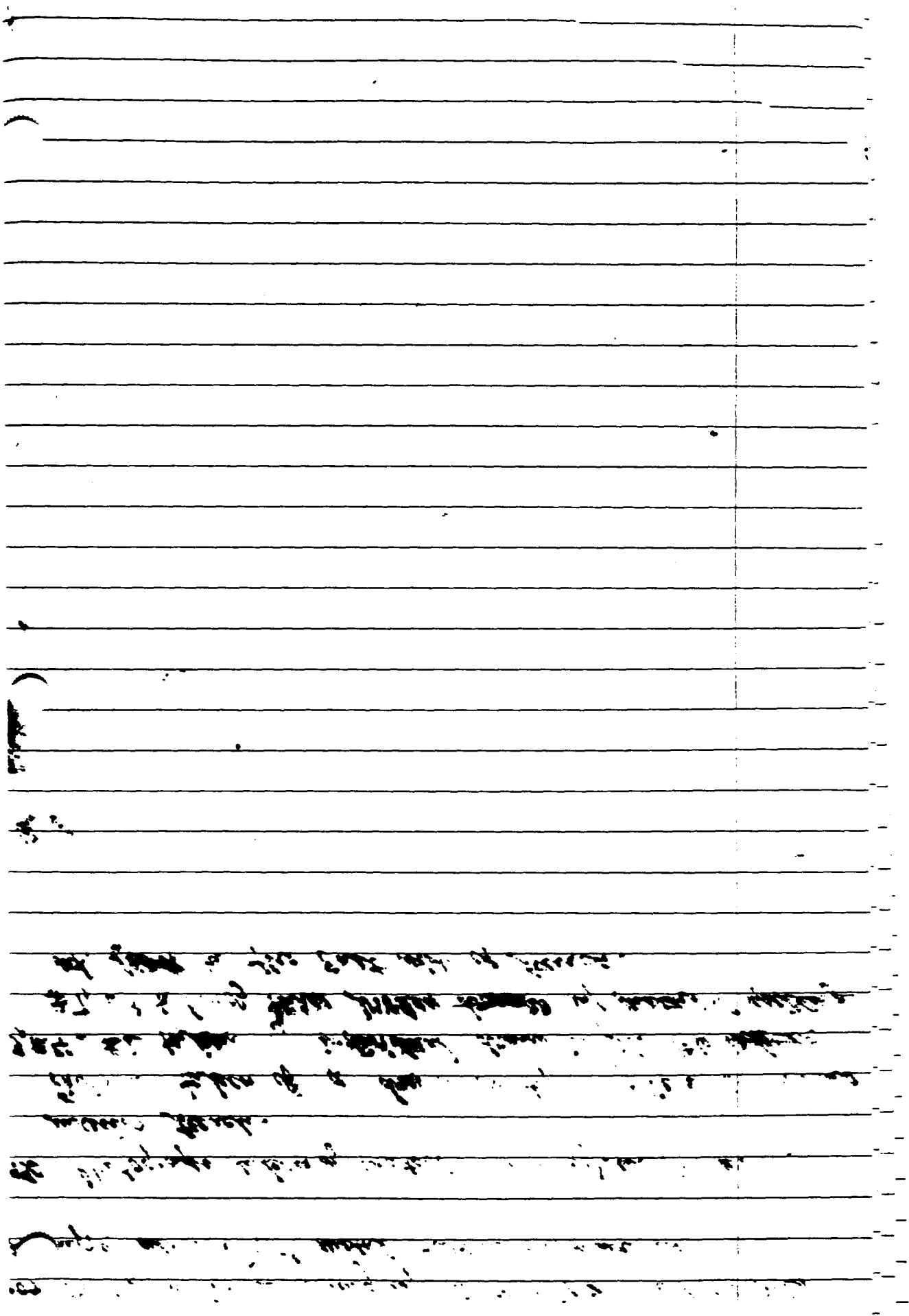
3-11-00

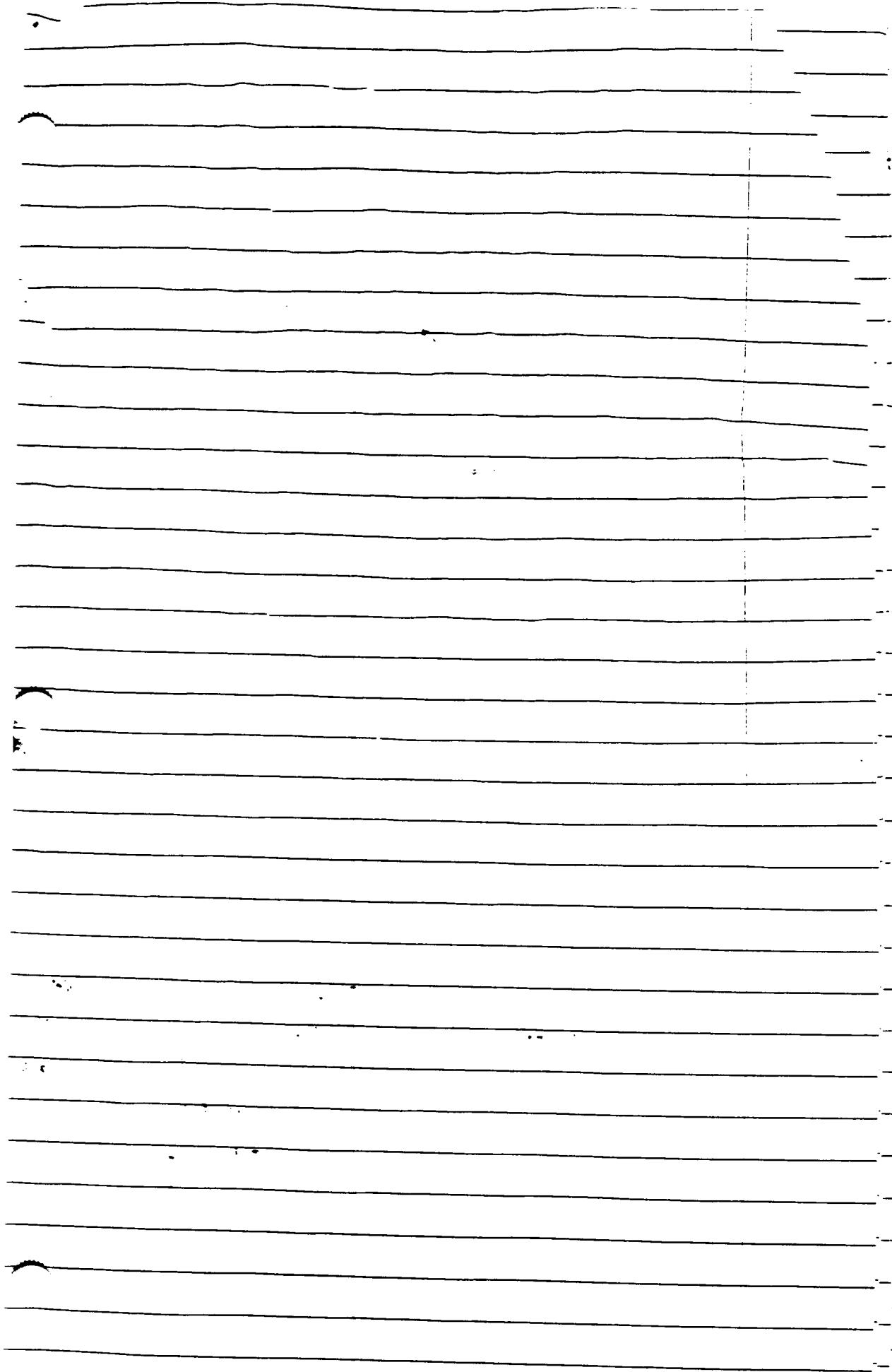
Over metal cables were dug up @ 25' & wood @ this
old camp also. @ 6.5' metal cable uncoated.

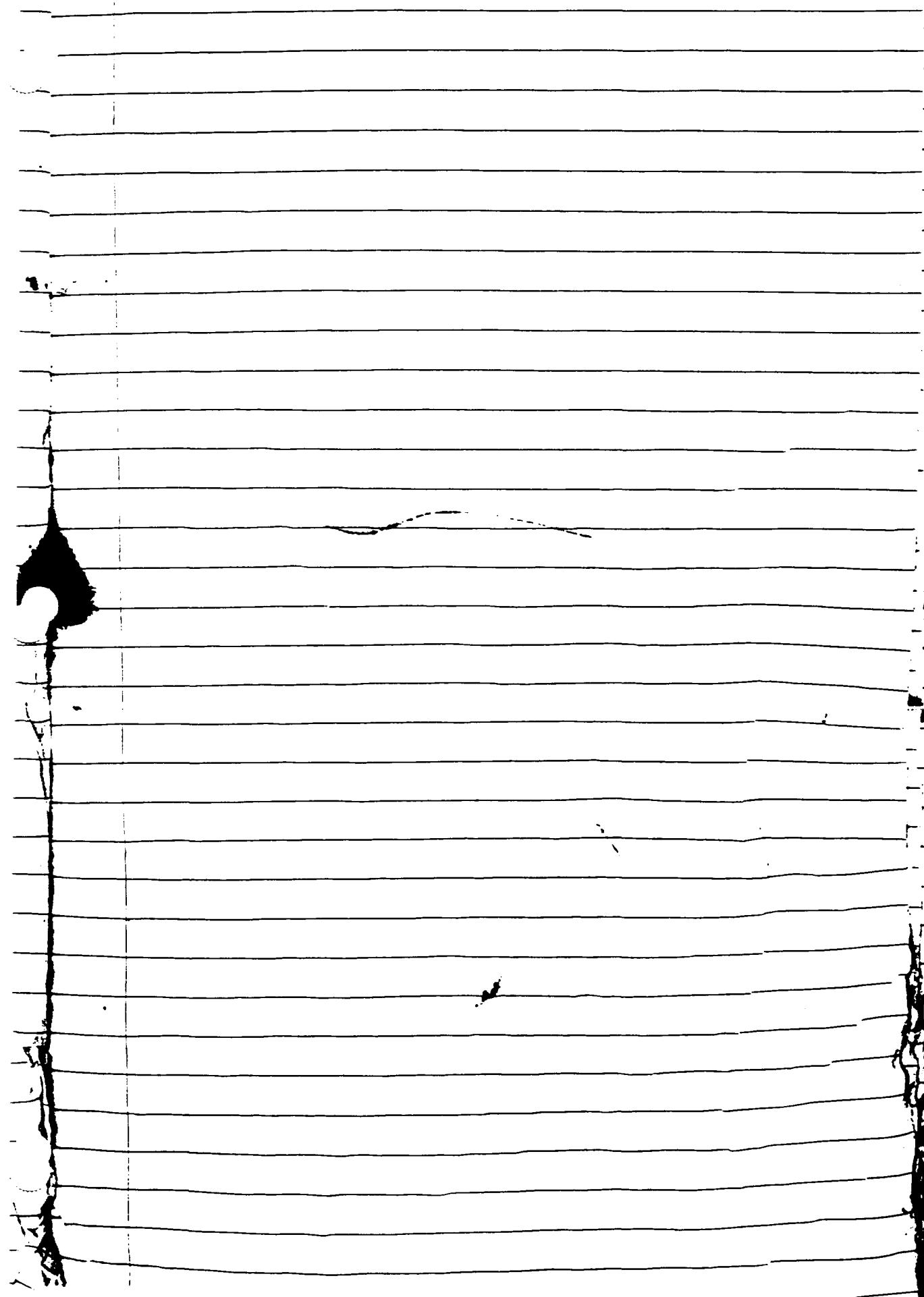
We did photograph taken of material (copper) from
earlier truck.

Photo I taken of a down on top of pile of 5 down
#25, #2 taken of individual down in pile #6 taken
#7, #8 taken later down of material remaining
at old camp in the east side of fence.

2







4

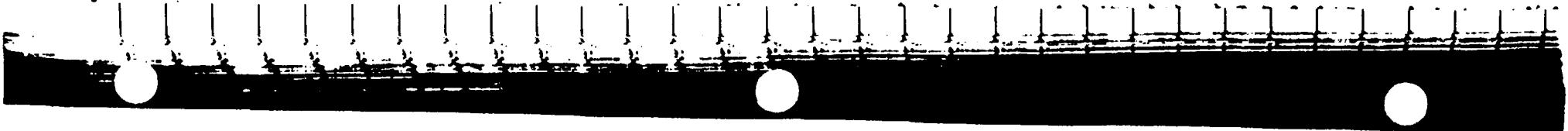
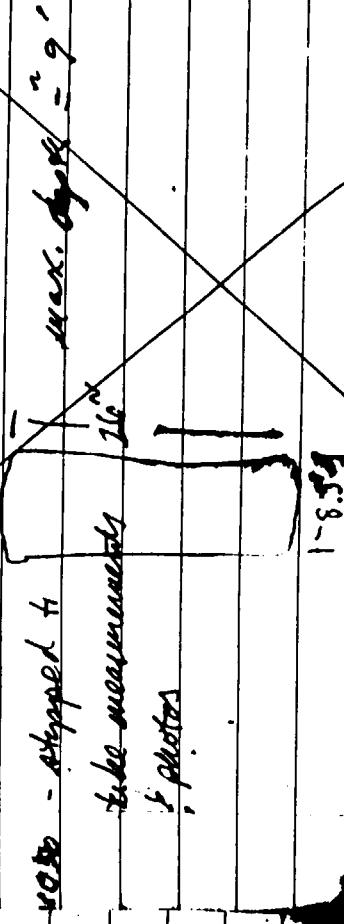


Photo #5 seems to be in the best shape and does (-11-09)
 and appears to have any holes in it, but after further
 investigation it has two large holes in it. Photo #9
 taken of this down #5. Photo #10 of a deteriorated
 down.

#26 Cutlasswood recovered from v7' f West side. #10 down
 recovered @ this time, not whole material yielding cast.
 Photo #11 of said down.



#28 Photo #5 shows @ this time #12 Indian tree
 and similar to the larger of down. #13 debris
 broken off branch. #14 N. side made to 10' 6".
 #15 E. side of fence and down on it.
 #16 N. facing side of pile #117 at face with
 off pile #15 of top and side. #18 of branch
 down on down in it.

No-down on pg. 95

وَمِنْ أَنْتَ مَنْ يَعْلَمُ
أَنَّهُمْ لَا يَرْجِعُونَ
وَمِنْ أَنْتَ مَنْ تَعْلَمُ
أَنَّهُمْ لَا يَرْجِعُونَ

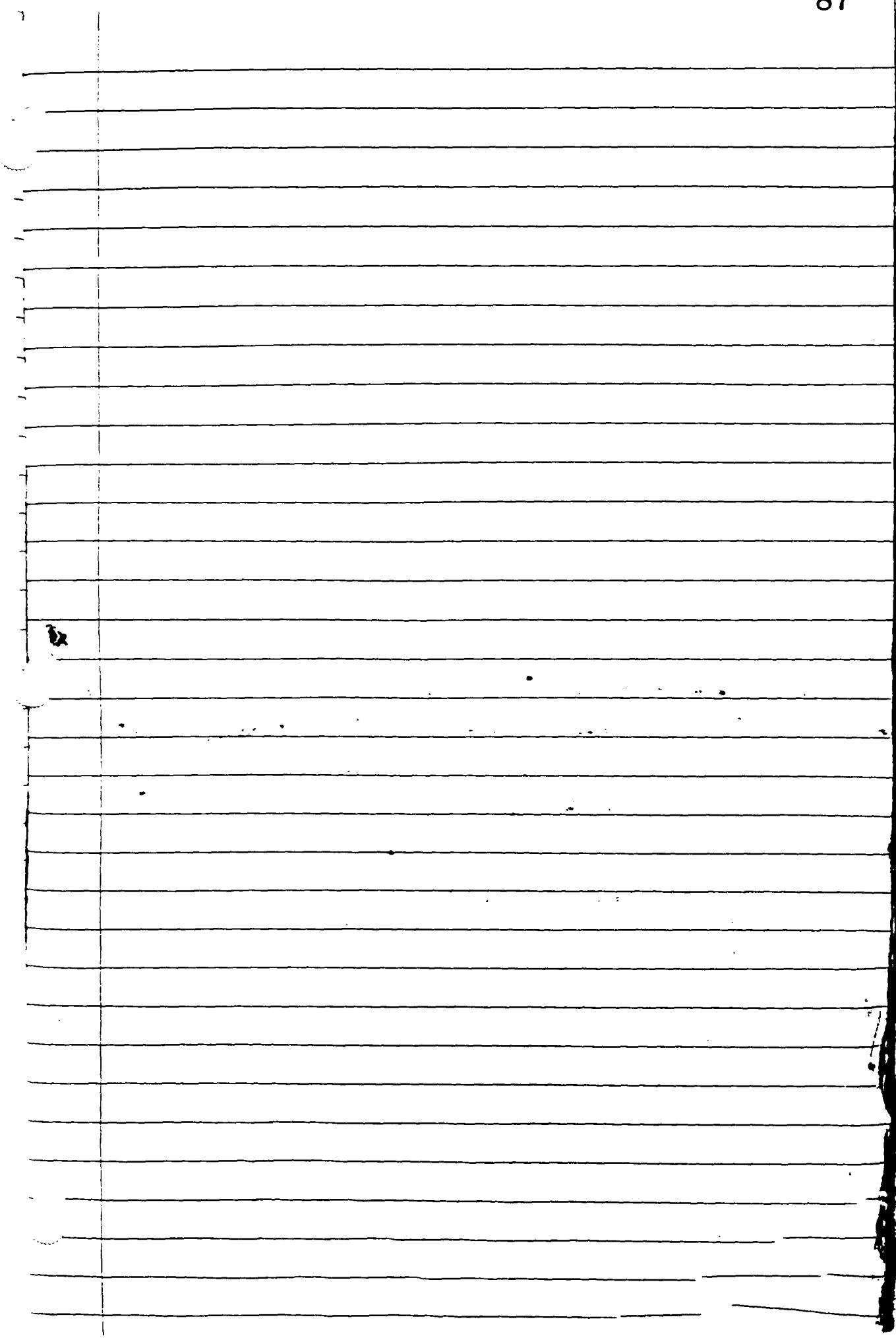
156. *Pomacentrus maculatus* Steindachner
from Siparuna the Agouti Islands off Borneo
Dorsal of 192 mm total length.

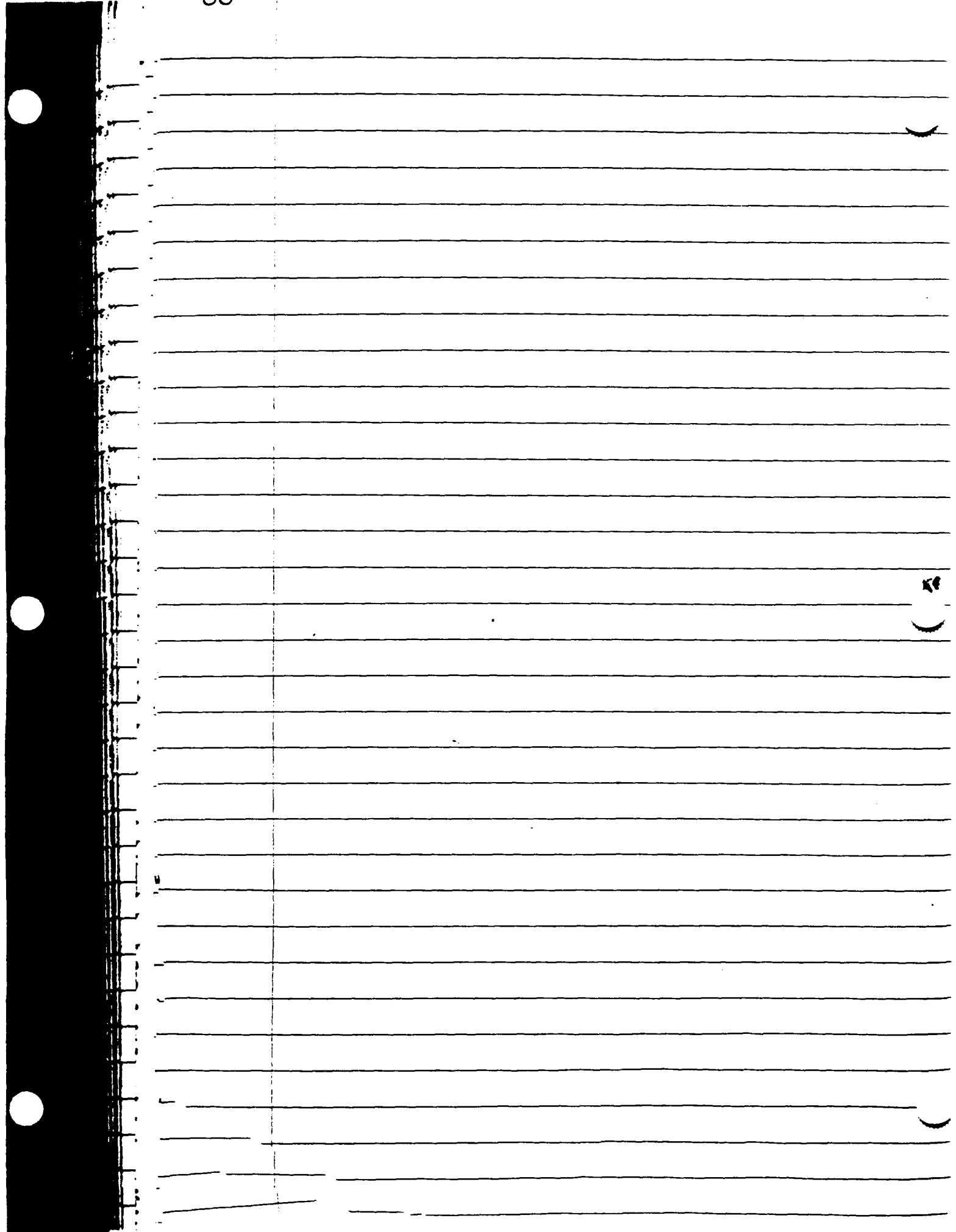
I 106. *Pomacentrus maculatus* Steindachner

ii 106. *Pomacentrus maculatus* Steindachner

106. *Pomacentrus maculatus* Steindachner

106. *Pomacentrus maculatus* Steindachner





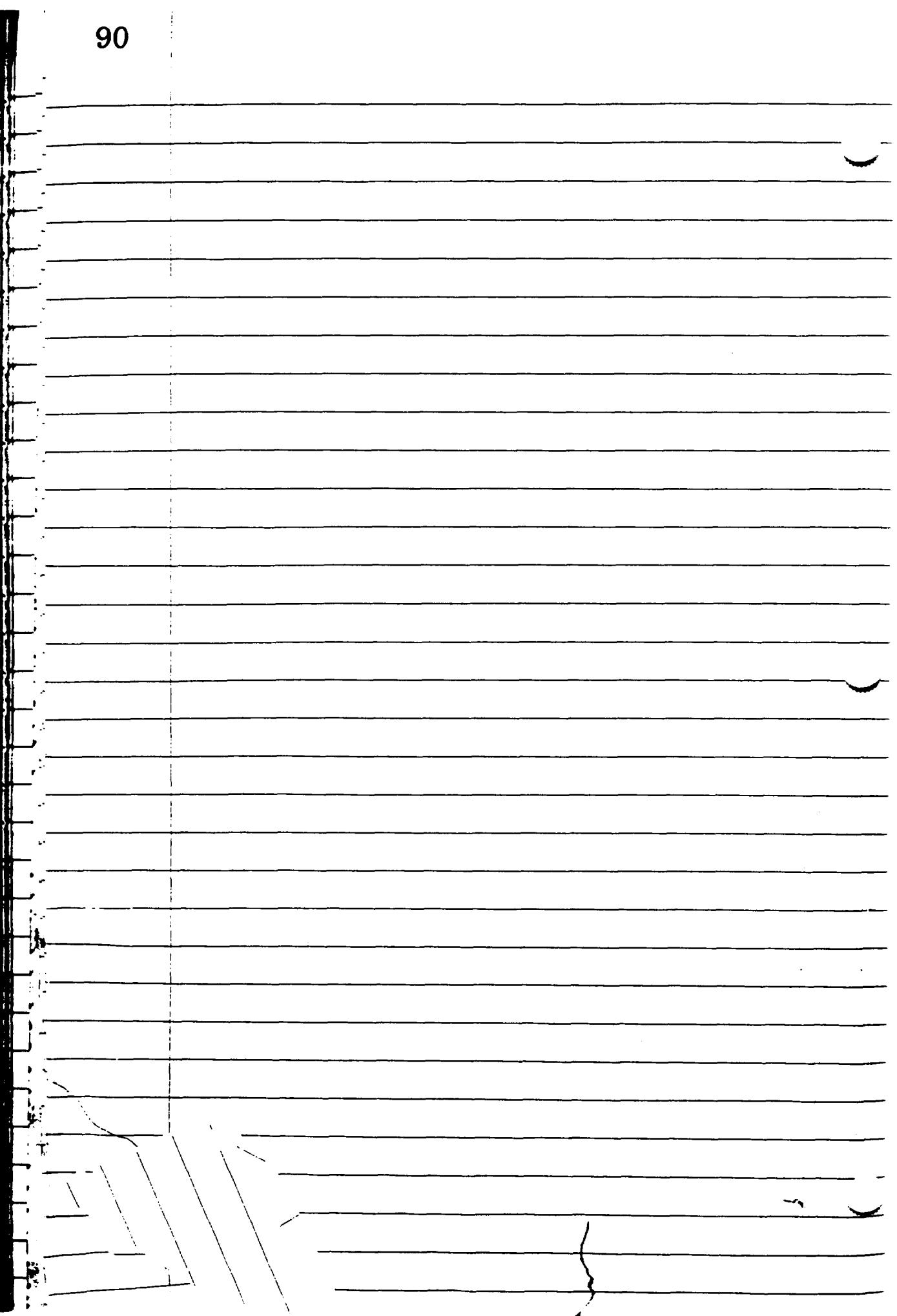


Photo #20 - general overview of the site. (3-11-00)

~~115 Heritage begins backfilling QB6 goes through
the procedures and has a short break.~~

~~Heritage is done backfilling the trench and is decommissioning
the socket before mobilization to the Northern site or trench
on from the Southern interior trench. QB6 has all remaining equipment
picked up and moves onto the Northern trench @ site T.~~

~~116 K. Perry goes to lunch. (Pg. 75) mark location of southern
trench side stakes.~~

~~116 DEH, TEL set up exclusive zone / decom. area @ Northern
interior trench boundary.~~

~~117 Heritage returns from lunch.~~

~~2. S. Kemper, TOT, K. Perry arrive back onsite after
lunch.~~

~~3. Heritage begins digging trench @ site T (Northern interior).~~

~~~1.5' of top soil is composed of gravel for parking lot.~~

~~? @ ~2.5' of black soil is excavated, brick/wood pieces  
this depth. Metal pipe also uncovered here (~2" x 3"). Large  
chunk of concrete w/ rebar uncovered.~~

~~? metal scraps present @ ~3.0' + bg. fiber and lot of concrete  
chunks @ this depth.~~

~~2. metal scraps (rebar included) still present down to ~5' b/g~~

~~21 visible metal scraps embedded in walls of 3.5' trench~~

~~15 Possible native soil encountered @ ~5' b/g~~

~~17 Trench is lowered closer to the bottom again @ ~2.5' b/g  
lot of rebar, fiber, bricks and metal scraps encountered. @~~

~~SW corner of trench a very large chunk of concrete was  
unearthed, could possibly be con anomalies. ~8' x 12'~~

~~Still extending trench toward the South, more material  
unearthed @ same depth ~5' b/g~~

~~3. Photo #1 taken of NE side of trench~~

~~#2 taken of E side depicting native soil.~~

~~15. Southern trench to ~5' b/g appears alot of concrete  
columns (not in photo)  
(Refer to Pg. 99.)~~

1943

1944

1945

1946

1946

1947

1948

- \* Photos taken (3, 4, 5, 6) of large concrete slab, (3-11-00)  
and various chunks of concrete containing rebar.  
Photo taken of column with metal sticking out.
- crumpled up sheet metal encountered in trench from "5' by  
1432 Trench is "95' long no drums witnessed yet, a lot of metal  
scrap and metal embedded in concrete.
- 1440 Another large slab of concrete, unearthed for southmost  
portion of trench.
- \* Photo taken of rebar in concrete  
" " " large slab of concrete.
- 1445 [ ] 5' 6.4" deep.  
1 - 55' - 1

Excavating for the day is complete, backfilling by Heritage  
will begin.

FEH took PID reading at 6 locations @ pile of debris - the  
ppm was 1.0 (same as ambient).



all the equipment gathered and ready to return to site I.  
We brought sufficient material to finish the job.

1115 - A walkage is dug back filling the trench and is returned.

\* 1020-1055 (Recorded on the back of this page)

- Several sections of the sandstone were cut through

with chisel & hammering out.

Photos - taken of broken down in section of stone.

Photos - taken of individual stones in a pile of stones.

- Photo # - taken of a drum or top of a pile of stones.

\* 0930 - Photograph taken of drum in Sandstone section much

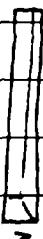
0940 - Metal rods, wood, metal strips were dug up @ 5.5' Riddle area @ 6.5' 6

concrete wood.

The material in the drum is a solid, yellowish material that  
looks like just coming to the drum up from cutting the soil.

0933 - Drum measured @ 5.5' - same size as last for the fact that the

III 0930 - 2. Hammer and anvil cut  
#3 drum  
#3 anvil  
— Hard side can be excavated.



solidified. The drum will be passed to the soft side so that the

0920 - Drum measured @ 5.5' - it appears to be like the one above,

excavated drums are passed to the soft side of the tools.

0905 - Hammer digging out drum #3 @ 4'; Breakage appears common that the

excavated shingle often @ the same depth as 4', 6'

111, metal scrap was measured as wood a drum. A second drum was

7' long and by four inches thick and wood in it and wood. At this depth

gained @ top "3.5" deep, light sandy soil underneath to a depth of 4';

0855 - Tugger @ 8' from trench @ site I. Shovel measured around the top of

larch has been applied.

Based on direction received from USEPA site I instruction which

3-11-00

Initial trenching Job I

50

# Site I, Interior Trenching

(3-11-00)

11

1020 Drum #5 seems to be in the last stage and doesn't appear to have any holes in it - further investigation reveals drum #5 has two large holes at the bottom side.

12

\* Photo #9 taken of this drum #5.

12

\* Photo #10 taken of a deteriorated drum.

12

1026 Cardboard recovered ~ 7' & bg from side of the trench #10 drum recovered @ this time, its not intact with material (solid) spilling (falling) out.

13

\* Photo #11 taken of drum #10.

13

1050



max. depth = ~ 9 & bg

131

#12

1055 \* Photos taken @ this time from East side of trench, showing the W. side of trench (entire length).

132

\* Photo #13 shows debris on bottom of trench.

133

\* Photo #14 showing North side wall to ~ 6' & bg.

134

\* Photo #15 showing East side of trench w/ drums in it.

134

\* Photo #16 showing West side of ~~trash~~ refuse pile.

135

\* Photo #17 showing Northern side of refuse pile.

135

\* Photo #18 taken of top of ~~the~~ top-soil pile.

135

\* Photo #19 taken of trench bottom with drums in it.

140

11

1158 - TPT, K.P., E.K. go to lunch. NEH, DEH mark location of  
soil  
southern trench with stakes. 3-11-00

1236 DEH, NEH set-up exclusion zone / decom. area @ southern trench area

soil

1240 Heritage returns from lunch.

1252 TPT, KP, EK return from lunch.

#10  
trial  
1303 Heritage begins digging @ northern interior trench (site I). ~1.5' bg is composed of gravel for parking lot.

1309 ~2.5' + bg black soil is encountered. Bricks, concrete, metal, wood all present @ this depth. Pipe uncovered here (metal) 2" x 3". Large chunk of concrete w/ rebar is dug up.

1314 Metal scraps present @ ~3' + bg, also a lot of rebar and metal scrap.

soil,  
1327 Metal scraps are embedded in East portion of trench.

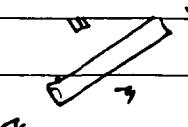
1335 Native soils encountered @ ~5' + bg.

in it.  
1347 Trench is moved to the South and @ ~2.5' + bg, a lot of concrete, metal scrap, rebar encountered

x  
1356 At South West corner of the trench a huge slab of concrete was dug up  
it. could have given a very high magnetic signature. ~ (8' x 12')

1400 Still extending trench to the South, same material unearthed here  
that was found in the Northern and central portions of the trench

★ 1413 Photo #1 taken of NE side of trench.



Blank

(Pm)

\*

C

7

4

4

1432

Hg

1440

a

\* Pha

\* Pha

1442

Hg

P.L.

am

1440

8L

@

# Interior Trenching, Site I

99

(3-11-00)

1420 ~~Northern interior~~ trench to ~5' bg shows a lot of concrete columns with rebar in them.

\* Photos taken (3, 4, 5, 6) of large concrete slab and of various chunks of concrete containing rebar.

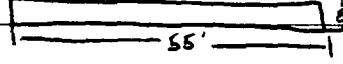
Photo taken of concrete column with metal sticking out. Coiled up sheet metal encountered in trench from ~5' bg.

1432 Trench is now ~45' long, no drums located yet, a lot of scrap metal though.

1440 Another large slab of concrete uncovered from southernmost region of trench

\* Photo taken of rebar embedded in cement

\* Photo taken of large slab of concrete.

1445 Trenching for (3-11) is complete, Heritage will backfill DEH took six PID readings from the refuse pile - the ppm was 1.0 (like the ambient ppm). 

1600 Heritage nearly finished with backfilling. DEH took PID readings @ 10 locations @ pile of debris. The ppm = 1.0 (same as ambient).

LR80

57530

580

08

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0821

5030

1620

1

21-5)

১৯৪৮

(3-12) water damage.  
 Personnel: NEI, DEH, TPT, KP, Heritage  
 Objective: boundary trenching (N, E, & W). determine horizontal extent of fill layer.  
 Weather: sunny, clear, 78° F estimate  
 3-12-00

Based on direction received from USEPA the site I boundary trenches have been approved. (Northern Trench) ..

0730 DEH gives health and safety meeting.

0805 OBG, K.P., and heritage set-up area to begin trenching @ site I northern boundary trench

(boundary)  
 0821 Trenching activity begins surface material (rock for parking lot) is scraped from surface (~1' & bg) and piled to the side. Larger chunks of concrete (in comparison w/ gravel-rock) are immediately excavated @ ~2' & bg.

0827 concrete chunks and bricks are removed @ ~3' & bg. A large piece of ~~largest~~ metal scrap is excavated @ this depth.

0830 @ ~3.5' & bg a large (5'x 2') concrete pillar is removed

0835 @ ~5' & bg a large piece of wood is uncovered, there are still lots of bricks and concrete chunks @ this depth.

0843 Heritage moves track-hoe so that the trench can be continued to the north so the horizontal extent of the fill layer can be approximated. OBG, K.P., and <sup>and</sup> ~~and~~ KP from Heritage lay out plastic for the soil from the trench.

0847 The debris removed is similar to that recovered earlier @ our first dig location ~~in~~ (concrete chunks, bricks, concrete pillars, few metal scraps) sand is reached @ ~6.5' & bg.

0902 The trench was dug to a depth of ~20' & bg, the sandy material was saturated at this maximum dig depth.

The fill area is "6' ~~total~~<sup>rock</sup>" in depth, this measurement doesn't include the "1' of gravel above.

Blank

0921

0927

0932

0937

0943

th

0951

to

ya

1012

m

1025

a

th

## SITE I - boundary trenching 3-12-00

- 0915 The northern boundary trench must be dug until one of two parameters are met: 1) reach groundwater 2) meet max. dig depth of digging equipment. This will enable OBG to know that there is not another fill layer under the native layer that sits below the first fill layer.
- 0921 The northern trench boundary is extended further to the north ~~|||||~~ and the material recovered from the different depths is like the material from the previous sections of this trench.
- 0927 E. Kemper arrives onsite
- 0932 Northern trench is further extended to the North "20' from the original dig point  quite a bit of metal scrap is uncovered along with concrete and brick.
- 0937 DEH took ~5 readings @ excavation pile = 0.2 ppm, and 2 readings @ surface pile that were also 0.2 ppm.
- 0943 There is a lot of concrete chunks containing rebar encountered @ this depth "4' & bg
- 0951 A large cave-in occurs @ the NW side of the trench, the trench is continued Northward as we try to locate where the fill layer wife into steps  →
- 1012 More plastic is positioned as the trench is continued to the north 
- 1025 A decision was made by TPT, DEH, + KP to not continue the trench northward as there is a good chance that the fill layer is uniform all the way to the end of Cerro

104

Blank.

(cont.)

1028

1034

\*

P

P

P

P

P

1095 A

1115 C

1145 O

blue

nor

wa

ana

enc

for

- \* Photo #1 - facing west taken at sunset time.
- Photo #2 - taken at E edge showing trees at shoreline cuesta.
- Photo #3-a At edge showing motor / field layers and moist.
- Photo #4 - shown N, N edge of thimble.
- Photo #5 - At N edge showing long pale m thimble wall.
- Photo #6 - facing south, took at edge of bottom of thimble.
- Photo #7 - " " " taken at first of bottom layers.

1034 - This depicts a maximum and 60% recall = 25% to make better

$\boxed{E}$  = area with additional car - in.  
16,  $E = 16 \times 16$  (16 x 16)  $= 256$ ,  $S_m = 256$ ,  $\rightarrow$  diag origin = 256.

STF I - Secondary Touching. (3-12-50) (cont.)  
The touching location

106

Blank

B

CE

1250

L

1258

2

8

1306

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1317

1

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1320

2

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Pho

Pho

Ph

Pho

Pho

Pho

Pho

Pho

Pho

Photo

Photo

Photo

fill

1331

DE

is

pile

1333

H.

1331 DEH follows PID reading from probe of accumulated material mainly composed of motor oil. But PID reading is over 0.2 ppm (allowable = 0.05 ppm)

- Photo 9 - follow a different edge of hand bag containing motor oil.
- Photo 8 - continuation of east touching side.
- Photo 7 - between of surface and of accumulated (motor) material
- Photo 6 - follow a bottom surface touching "oil boundary"
- Photo 5 - follow of surface touch.
- Photo 4 - follow of SE corner of touch.
- Photo 3 - " " " and handle in side of touch
- Photo 2 - follow bottom edge and feel in side of touch
- \* Photo 1 of east and bottom edges of the hand bag

1320 Photos follow

1317 Max digging depth is at most ~~20~~ 15, 16" and same - in accented measurement will then follow. Touch is ~4, wide & in east end and ~22, long ft, width and ~5, 10" wide

1306 Slanting will go to the max. digging depth in ground with no evidence of boundary found foot

1258 Material accumulated has in mostly dark color with lots of broken handle.

1250 Household begins to dig east boundary trench following top (foot touch) have been approached.

1252 Found in ditch from US EPA the site I boundary trench

SITE I - Boundary trenching (3-12-00)

LNU

7-19-00 PILOT TESTING (LEACHATE WELLS) SAUER AREA

7

Calibrated on 7-11-00 (date)  
 Calibrated by CMW (sign)  
 Standards used: ISO 8518-1  
 Units traceable to: 101 ppm  
 Test conditions are  
 Measurements & tests Y or N

1115

1120

0900 Tim TCDSS gone safety meeting to CWW. 1130  
 No solution rep on site for safety meeting.

0834 CMW & TT on site at site I leachate well 1135

0915 Cero employee arrived and removed equipment  
 Sampling zone

PID reading at site I leachate well  $\rightarrow$  12.7 ft well head 1138  
 $\rightarrow$  0.1 in breathing

Top of Cero, Water level in well  $\rightarrow$  15.8 ft  
 zone

1015 Began purging of LEACH-2-I. Water began clear  
 then turned black, then turned clear-brown. 1100  
 PID off water was 1.5. Parging rate 1230  
 remains consistent at 135. 1345

1030 TT leaves site to get PIP charged, tape, and  
 gas for generator.

1105 TT Returns  $\rightarrow$  2<sup>nd</sup> drum is being filled - need 1420  
 70 gallons before sampling 1500

1110 Water being discharged to 2<sup>nd</sup> drum is  
 cloudy brown 1450

7-19-00 - P.1st Tshing (located well) Sight Area 1

### 1115 Begin Sampling

1120 77.2 ft sempling, discharge to container  
0.0 in breathing zone

1130 0.0 in breathing zone  
3.7 feet of draw

well 1135 0.0 inside full cooler  
0.0 in breathing zone  
60.6 ft at sempling discharge to container

1145 1138 Finished sempling 25 gallons (5 coolers)  
- water varied from dark brown to  
black → never cleared  
8.4 ft  
several elevations for purging were 28 feet from  
top of cooler.

1150 Cuv & TT left site I for site to draw off cooler  
1230 Cuv & TT went to lunch.  
1345 Cuv & TT at site G  
P.D. reading at mouth of well = 0.4  
and

Ambient air = 0.0  
water level to top of cooler = 14.0 ft  
Pump set at 25 feet below top of cooler  
Only because the control had maxed - out

1450 started to second draw. P.D. off top of  
first draw = 2.7.

110

7-19-00 - P. lot Test Sampling (Charlotte Wells) Syntex 1  
1500 Started sampling

1570 .5 PID reading on top of down

0.0 <sup>PID reading</sup> in breathing zone

54.5 PID reading at discharge to container

1518 Sampling complete

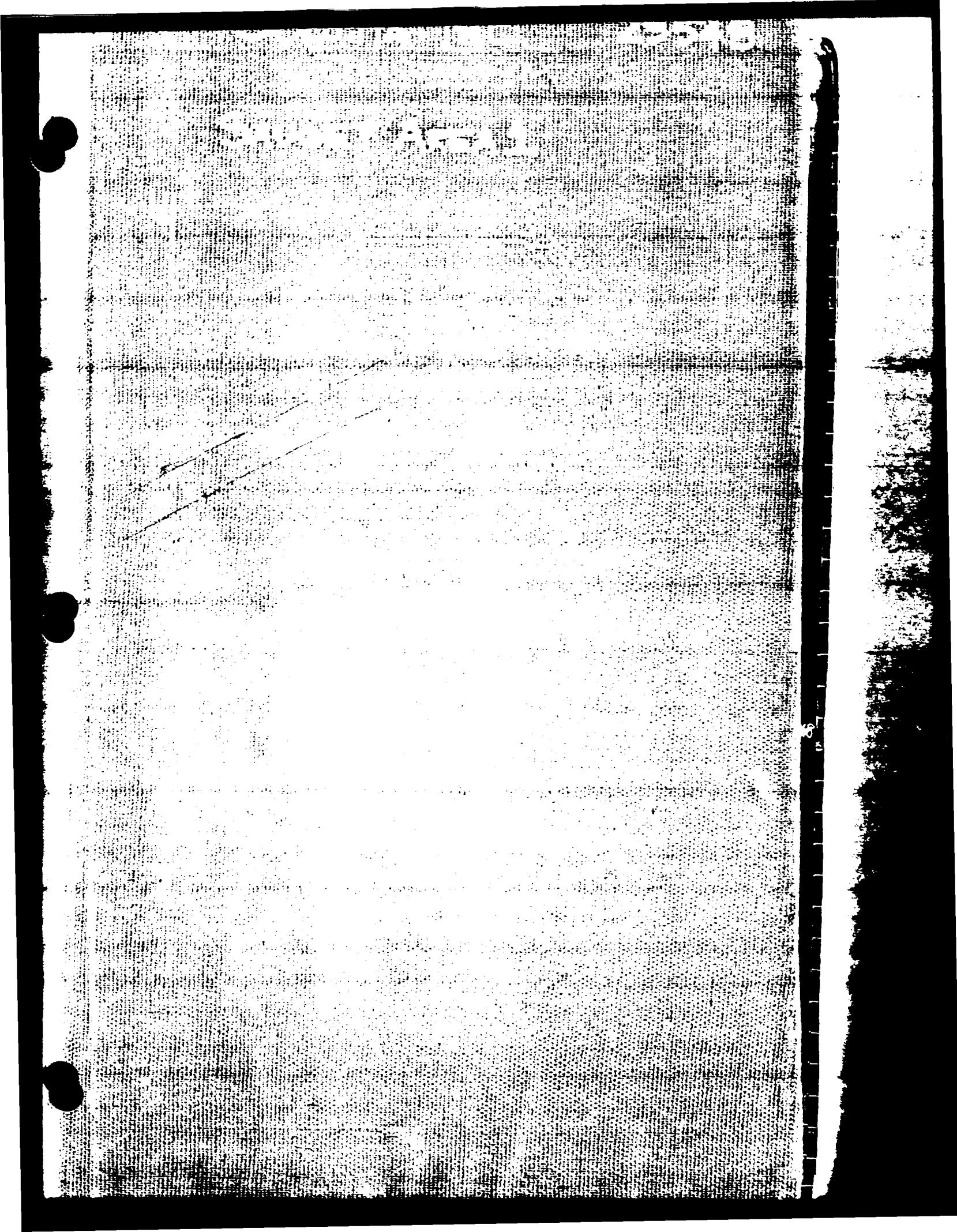
- water cloudy brown throughout

- kept pump rate @ 400 for pumping &  
300 - 250 for sampling

1530 CMW & TT returned to jailhouse to dispose  
of ppe.

1550 CMW & TT Returned to site R.

Colin Welleray  
7-19-00



SOLUTIA, INC. - SAUGET AREA 1

RECORD BOOK # 3

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Doreen Averett - Direct & Our Weather state  
(618) 332-0001

0800 i

David Meyer - Lyne Environmental Services  
etc 314-343-3700  
fax 314-343-4614  
cellular 314-515-5753

0900

Mark Green - Zimmerman  
574-7283 (mobile phone)  
664-7100 (etc.)

0945

0955

0.20  
0.00  
N.O.O.  
0.75

Section 5.22 FSD A/S samples  
Rob Nemec - O'Brien & Gee RN  
Alan Clark - O'Brien & Gee AC  
Dace Thompson - O'Brien & Gee DT  
Dene Thompson putting together stand for PM2.5 differences

00:10 56/3/b  
Luminescent

ACFAN Design File each for 101 samples

o Joe Poetry Site + helping w/ Total Sample  
soft-sp. WE WANTS HELP put these back

#4709 #47110 #4713  
ID, AC APN self up PM2.5 Sensors

#4709, #AT16, #AT13 for PM 2.5 sampling  
as Began to perform performance studies to Uni

$$P^{\circ \text{deg}} = 500\text{m}$$

$\text{BP} = 26.88 \text{ "Hg}$

१०८ ग्रन्थ

AUGUST

HHR Sampling  
Performance Audits

185021

| PM 2.5 Unit #      | #4709    | #4713    | #4716    |
|--------------------|----------|----------|----------|
| Ambient Temp Audit | 26C      | 26.7C    | 26C      |
| Exch Temp Audit    | 26C      | 26.9C    | 26.9C    |
| DFlow Audit        | 16.7 lpm | 16.7 lpm | 16.7 lpm |
| Leak Check         | NA       | -1" Hg   | NA       |
| Pressure Audit     | 760      | 760      | 760      |
| Pressure Audit     | 760      | 760      | 760      |

| PM2.5 Unit # | # 4717 | # 4710 | # 4712 |
|--------------|--------|--------|--------|
| Ambient T    | 27 C   | 25.4   | 27 C   |
| Exch T       | 27 C   | 26.6   | 27 C   |
| Flow         | 16.7   | 16.6   | 17.4   |
| Leak ✓       | NA     | 0      | -0.5"  |
| Pressure     | 760    | 760    | 760    |
| Pressure     | 760    | 760    | 760    |

| PM2.5 Unit # | # 4714 | # 4715  | # 100507 |
|--------------|--------|---------|----------|
| Ambient T    | 27 C   | 27.9 C  | 27 C     |
| Exch T       | 27 C   | 28.8 C  | 27.6 C   |
| Flow         | 16.18  | 16.6    | 27 C     |
| Leak         | NA     | 2.5" Hg | NA       |
| Pressure     | 760    | 760     | 760      |
| Pressure     | 760    | 760     | 760      |

| PM2.5 Unit # | # 100508 | # 100506 | # 100505 |
|--------------|----------|----------|----------|
| Ambient T    | 27 C     | 28.5     | 28 C     |
| Exch T       | NA       | NA       | NA       |
| Flow         | 16.6     | 16.7     | 16.7     |
| Leak         | NA       | NA       | NA       |
| Pressure     | 760      | 760      | 760      |
| Pressure     | 760      | 760      | 760      |

over sampling

3

- 30 JD Beffa w/ DS6 Ames @ site  
305 Finished Calibrating PM 2.5 Samplers  
Except for Model from Tisch # 100506  
Additionally, one model missing PM 2.5 Head  
will be overnighted by CAF will pick-up on  
morning  
415 WEWright & DA Thompson Hexane Rinsed PUF Monitors & loaded PUFs  
30 Began Calibrating PUF Samplers from Tisch  
Calibration Logs were completed for all  
39 PUF Samplers. These are in  
separate cases  
00 Finished Calibrating PUF Samplers all within  
tolerance for units. Documentation on  
separate field logs completed under  
separate cover.  
' WEWright & DA Thompson completed Hexane Rinse  
of PUF Monitors & loaded PUFs.  
35 Began Site Clean-up & Calibration of Gillian Aircon  
Sorbent Tube Pumps.  
35 WEWright & D. Thompson Left Site  
450 The DryCal DC-LITE Calibrator for Gillian Aircon's  
can't measure low enough for the flowline  
need 2ccs of air/min. Have to fill  
back tomorrow to see what our options  
are  
000 Left Site. JD Beffa  
JW Perry  
R Nemire  
AJ Cook

# Air Sampling

365 Pg 200

Pm2.5 unit Tach # 1

|          |       |        |
|----------|-------|--------|
| Loca ✓   | solon | Passed |
| Am3/Hoto | derit |        |
| Brant T  | 18.6  | 21°C   |
| Pressure | 76.3  |        |
| Flow V   | 16.7  | 16.7   |

0855 weather 18.0°C

3P 30.04

wind 220 at 04 mph

1240 TO-1 Run? Calibration

Pump w/ flow restrictor

Pump No. 01 Pm

AC-27

AC-25

AC-22

AC-21

AC-23

AC-15A

AC-26

AC-12

# 3144

AC-20

AC-28

# 3143

AC-36

2838

000

All sampling

L Pm

| <u>AC-27</u> | <u>AC-25</u> | <u>AC-22</u> | <u>AC-36</u> | <u>AC-15A</u> |
|--------------|--------------|--------------|--------------|---------------|
| 0.0010       | 0.0077       | 0.0075       | 0.0067       | 0.0062        |
| 0.0095       | 0.0154       | 0.0062       | 0.0066       | 0.0131        |
| 0.0094       | 0.0062       | 0.0049       | 0.0066       | 0.0052        |
| 0.0091       | 0.0063       | 0.0050       |              | 0.0052        |
| 0.0095       | 0.0068       | 0.0048       |              | 0.0050        |
| 0.0093       |              |              |              |               |
| 0.0094       |              |              |              |               |
| Avg          | 0.0094       | 0.0064       | 0.0049       | 0.0066        |
|              |              |              |              | 0.0051        |

| <u>2838</u> | <u>AC-23</u> | <u>K-21</u> | <u>3144</u> | <u>AC-76</u> |
|-------------|--------------|-------------|-------------|--------------|
| 0.0067      | 0.0095       | 0.0061      | 0.0048      | 0.0098       |
| 0.0069      | 0.0080       | 0.0062      | 0.0048      | 0.0072       |
| 0.0070      | 0.0073       | 0.0062      | 0.0048      | 0.0071       |
| 0.0069      | 0.0073       |             |             | 0.0072       |
|             | 0.0072       |             |             |              |

| <u>AC-12</u> | <u>AC-20</u> | <u>AC-28</u> |
|--------------|--------------|--------------|
| 0.0091       | 0.0059       | 0.0049       |
| 0.0091       | 0.0059       | 0.0059       |
| 0.0091       | 0.0059       | 0.0066       |
|              |              | 0.0070       |

1 H 2000 - 0.0069 = T 4.2

# Air Sampling Utility location

9/10/99 Air Sampling See 5.22 in FSP

0530 Called Mini-Turkeys to Refuel Generators  
@ Site H & I. Began Loading up Air Sampling Equipment

JW Perry & WE Wright left to take Magnetic Readings from PFS & Creek  
Other Sampling Equipment @ Site I & J

0745 JW P & WEW Back from Checking Sampler Readings @ Site H & I. Also met Mini-Turkey's to Refuel Generators. Been running for 12 hrs and six generators only used 70 gallons.

AJC Finished Loading up equipment.

0800 R Neiman & Dawn Thompson arrived  
@ Site R (String Area)

0900 Met w/ Rossel Kimee ILAM Water  
Locutor Site H @ Core of Nickel  
& Falling Spring to Hydrant on South  
on West side of road 6" Water.

Site I - Nothing on Quarry until  
true here @ Quarry & F5 Road  
Hydrant @ City Hall Runs to Core  
(north) of F5 Road 6" Water  
line on west side along F5 Road  
at the bottom of Cem. Property

6" Water line on So. Side of  
DIA Quarry Trestle M to Line  
along F5 Road @ Hydrant



(618) 254-1112 Ext 16. (Lynn Cassis Distr)  
N to Clear area. Home M. house  
few steps before we walk to S. St.  
End goes to RT 3. S. St. Bob a  
Friend Street. Telephone number Edm  
located Hwy 54 a Pipe Line down  
McKee Rd. Pape Line 080

3/9/99.

EDA, COE & Warden on Tuesday  
plan to have the Reelin meeting at  
the Exchange Club. We will  
have an open day there will include  
doing what we do to help S. St.  
by discuss some issues about who's  
like to make a site visit to already  
done said this on line but would  
about Shelly next Wed 9/15/99  
Contact D. Huns @ 447-8888

195 Mr. Mike Williams w/ U. City of Suffolk  
shopped by to Clear S. St. stone  
concrete see picture from Market

196 Mr. K. K. w/ IL-AM Left Site

D. Spagnoli (618) 239-3270

197

IL Am w/ Co. D. # (618) 239-3256

would know

\* Site N Common Field which of C. Park

Site N

Site M Mr. Williams  
Site L Mr. Williams  
Site G Mr. Williams

Common Field

9/11/99 - 1300 Air Sampling

Mini-Tankers arrived @ S.I.C. H where we are  
staging last 6 generators. Replaced generators

1400 Mini-Tankers left site.

9/11/99 DEZ

Air Pump Numbers - used for VOC sampling

| <u>Top</u> | <u>Front</u>    |
|------------|-----------------|
| AC-25      | 2871            |
| -          | 2838            |
| AC-15A     | 2849            |
| AC-36      | 3210            |
| AC-27      | 3212            |
| AC-22      | 2998            |
| 3143       | 3143 (not used) |
| AC-21      | 3213            |
| AC-28      | 3211            |
| AC-26      | 3208            |
| AC-12      | 2842            |
| AC-23      | 2994            |
| 3144       | 3144            |
| AC-20      | 3222            |

3580

# Air Sampling

9/11/99

## Recalibration

Post calibration of air pumps for UHS

pre cal done w/ a Bios flow meter

post cal done w/ a Gilian Bubble Generator (low flow)

Ciliometer Flow Cell SN 103223-L

values in cc/min = ml/min

AC-25

28.38

5.67 1.79

5.47 1.69

5.80 1.64

6.16 1.70

5.82 tot 6.82

6.15 avg 1.71

5.92

2t 40.99 pre cal avg 6.9

avg 5.86

pump setting may have  
pre cal avg 6.4  
been accidentally changed  
(knob bumped, etc.) during  
pre & post avg: 6.15 ml/min set-up or take-down

AC-15A

post cal using Bios

flow meter

3.86 tot 10.88 (as a check)

3.82 11.47 10.3

5.99 11.30 10.3

4.03 11.14 10.1

tot 19.69 10.91 10.2 avg

3.94 test 66.94 avg 16.16

pre cal avg 5.1 pre cal avg 9.4

Air Sample Air Sampling

AC-36      AC-22

5.61

6.02

5.22

5.83

5.69

28.37

tot

5.67

avg

7.25

6.92

7.75

6.97

tot

43.5

avg

7.25

Area 4.9

AC-22      AC-23

5.77

10.77

10.41

10.55

12.25

10.94

tot

16.13

avg

11.52

avg

4.03

5.01

11.19

tot

54.19

avg

10.84

Area

7.3

10.84

10.84

10.84

10.84

Area 4.8

39.5

58.8

59.1

59.2

59.1

59.2

59.1

59.2

59.1

59.2

59.1

1.2      10.84

# Air Sampling

11

AC-12

11.25

10.81

11.42

11.10

tot 44.58

avg 11.15

precal 9.1

AC-21

4.70

5.37

5.25

6.20

5.48

5.66

tot 32.66

avg 5.44

precal 6.2

AC-28

21.29

12.43

4.65

3.77

3.67

3.46

3.72

3.54

tot 18.16

avg 3.62

AC-26

6.66

5.74

5.30

5.62

5.22

5.69

tot 27.57

avg 5.51

precal 7.2

precal 6.8

at room temp : 25° C with 100% RH

60.9% RH at 100% RH with 100% RH

40.9% RH at 100% RH with 100% RH

125.125.1 ± 0.0

± 0.0 = 0.0

## Utility Marking

9/13/99 0820

Transcribed messages from 9/9/99:

- Mississippi River Transportation Co. (MRTC)

John Bright 314-609-1414

MRTC supplies natural gas

they have a 10" high pressure line crossing

Falling Springs Rd. @ Sterling Steel and Centro Copper

there are signs/markers in the area already

(✓ John will fax a sketch of the location to the field office  
received)

- Brad Gronfeld 314-658-5519

Laclede pipeline

they are clear of lines East of IL Rt. 3

9/13/99

0820 DEH met Marty Manning of Explorer Pipeline

they have a 14" petroleum pipeline which runs along

the S. side of Nickell to Queeny, along the

S. side of Queeny to just W. of Dead Creek,

along the W. side of Dead Creek to just S.

of Judith, and across a driving range S. of Judith

to the W.

(see map from Explorer)

the line is marked w/ white posts (black @ top)

it is ~ 32" deep, but depth varies from place to place

Explorer's R.O.W. is ~25'; Explorer must be

not when digging in or near their R.O.W.

Explorer 24 hrs before digging in R.O.W.

Contact: (618) 251-0251

Fax: (618) 251-0267

Scale 1 inch=2000 feet

Join Page 1

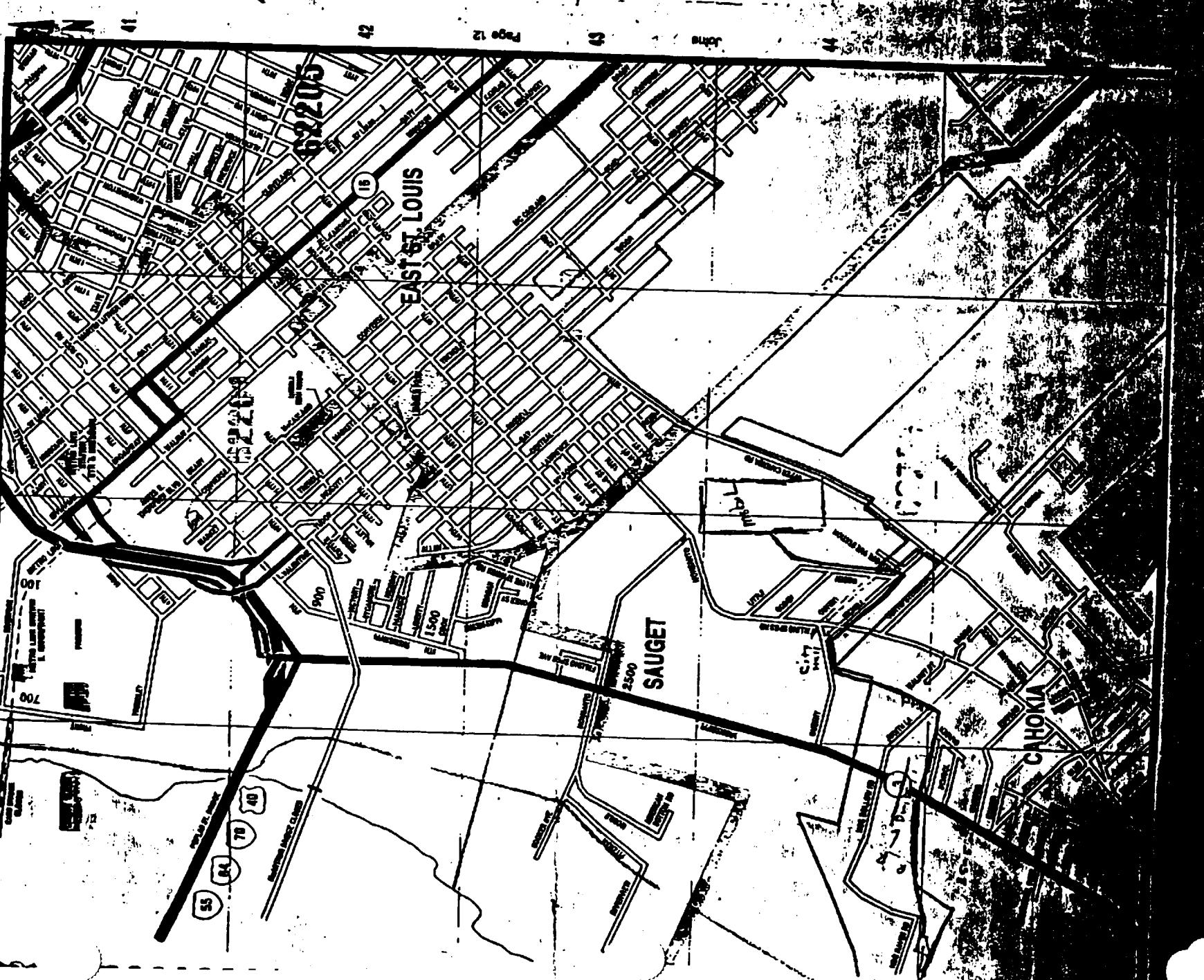
J

K

EAST LOUIS

SAUGET

CHOKA



Willy Makay

JULIE 1-888-292-0123

(all locations will be S. Linn County)

Customer to locate witness on  
9/9/99 by DEH

Dig # 2521784 (C) + 2521904 (Singer)

Along Country Line

" " 850. W. on N. side of rd.

From Falling Spur

" " 850. W. on N. side of rd.

Dig # 2521842 (C) + 2521920 (S)

Along Falling Spur

" " 850. W. on N. side of rd.

From Country Line

" " 850. W. on N. side of rd.

Dig # 2521854 (C) + 2521934 (S)

From Country to Falling Spur both sides of rd.

Along N. side ...

Dig # 2521862 (C) + 2521937 (S)

Parallel to N. side, 350-400 SW of N. side

From Country to Falling Spur along fence line

Parallel to N. side ...

Dig # 2521869 (C) + 2521944 (S)

Parallel to Country line

From Country to Falling Spur along fence line

Parallel to Country line

From Country to Falling Spur along fence line

9/13/99

# Utility Marking

continued utility locate info ...  
 (from 9/9/99 report)

(S.E.W.)

Dy #s 2521892 (C) + 2521861 (S)

- S of Judim "55D", N of Edwards "400",  
 W. of Falling Sp. ~700' just E. of Dead Creek  
 area 450' - 500'.

(E-W)

(N-S)

all utilities should be marked or companies should contact

call DEH, by Monday 9/13/99 @ 11:30 a.m.

(Call 875-3811)

10:25 Dan Hane arrived @ field office, discussed

logistics of trenching activities @ G.H. w/  
 w/ RIC & DEH

RIC & Dan visited sites as well  
 Dan left S.R. ~11:20.

11:50

DEH spoke w/ Vance Pruitt of Great Plains Locating,  
 who marks gas & electric lines. Vance thinks he  
 has everything marked as requested, but would like  
 to have a map to verify. DEH found Vance a  
 S.R. plan. Vance's #s: 618-394-9085 etc

618-407-0827 cell #s:

618-394-9232 fax  
 618-394-9232 (president) Several photos

# Utility "Survey"

15

1:30 p DEH met w/ Jeff Dancy of SM&T (?), who handles phone lines. There are buried phone lines along Falling Spring, Queenie, and Judith. Jeff will have the lines marked before Wed. 9/15/99. DEH gave Jeff a copy of the site plan for his reference. Jeff's #: 1-800-741-0674

1:50 p DEH met w/ Gary & Dave of MRTC (John Bright was not available). After reviewing the site plan, they thought the only line near the planned intrusive activities was on the N. side of Cerro Copper near the RR track. Gary thought this line was 8" in diameter. Since the digging at Cerro may not take place, Gary requested that MRTC be called again if it will happen, so they can clearly mark the location and possibly have someone present during digging.

2:30 p AJC, JWP, & DEH leave site for the day, go to office. Mike O. of Weston remains on site.

AJC & WEN are fit-tested w/ their respirators @ the office. Permatex fit is unacceptable.

DEH also fit-tested. His respirator is too large; smaller respirator is ordered for next-day delivery.

JWP to be fit-tested on 9/14.

92A

ed line on west end, hillside - 5 mi \*  
met this w/ rd worker and history  
of illegal mining at bottom

I went EGI w/ Laramie several 2 PM \*  
small on between cd

DE Hause durch den Tag und zurück nach DE Hause

\* After work will be a walk home.

- Case-in (NO Show or demand will occur)

- \* Total Demand Depth of family
- \* Conductor has access about double bed.

work will stop the day until 6 PM

- \* As soon as wife/mother demand occurs
- \* Plush for initial share

- \* Enclosed Mother will decline if any food
- \* NO wife/mother demand until occurs

\* No one will be entitled to services

through first 10 days physical

\* Doctor + dentist test teeth

\* Birth first examination ASAP - clean birth second

"d." limited by necessities, children etc.

\* Wherever can do from clean so 1 to

2) How Test training will be performed

Details of areas

1) How we determined test techniques (sophisticated)

Test Testimony Preliminary investigation

Items to discuss during Board

Test Testimony

w/ EPA/WESTA/DOE for Boundary

Procedure for Preliminary investigation Method

DE Hause-JW Party & AJ (ask

9/14/99

1) All wells in well zone which have  
H2S Meas for Ds activities performed

\* S.A.L is same as follow

\* Take P.ID Read off Back of hole  
Compare to P.ID Read from A.

\* Filter liquids will be dried back into  
Preliminary separation w/ Tin Canister

3) P.ID, PAM, GM will be used to determine  
- Nitrate -

- Dissolved O<sub>2</sub> in Tissue -

- Tissue (Activity)

- Solubility of water / chlorine

- Conductivity

- Dissolved gases

- SVOCs

- VOCs

- H2S methods / sensors

2) Headers of success:

LoEIC.

1) All wells in well zone which have

All the following Trapping

15.10.1978 - W.M. - P.M. - G.M. - 1000 hrs - 1000 hrs - 1000 hrs

some argue. all agree. K. Ferry. J. Firth, M. Quine etc.

Letter HS equip. for test tracking as best

$$\text{Auger} : 618 - 782 - 2817 = (-121 - \text{Glossary}).$$

$$\text{Ans: } 018 - 377 - 958 = 341 \quad \left\{ \begin{array}{l} \text{Police Dept.} \\ \text{SOS} \end{array} \right.$$

~~5058-222-819~~ : 270

The field office at 200 Lee St., Seattle, Washington, accepted a check for \$1,000.00 from Mr. John C. Fife, 1111 University Street, Seattle, Washington, dated April 1, 1940.

The Off-duty Police Officers (uniformed) will do present

Police Dept. ~ as the spokesman for the Employer's Party

Apparatus Early Chromatography - Separation of Carbohydrates

~~Return to field office~~

Shill

After sampling, shooting at sites A & I complete.

*complaint - D.R. J.W.P. A.I.C*

comes along @ 526 L for test shooting

HEQ

二十七

103

4 449

Digitized by srujanika@gmail.com

~~hwa-~~

107

211

10/27/11

— 3 —

6

63/h/10

Бондарев) вымывал ванту брёвна

# 1144 Area Boundary Monitoring

15

KWP fit-tested in new respirator → ok fit.  
DEH's new respirator did not arrive as promised.  
WRS fit-tested in JDR's respirator → ok fit,  
can be used w/ ~~other cartridges~~ ordered  
~~for~~ for HSC's respirator - should be  
enough on hand and of correct type.

WEV & DEH check instruments for operation &  
calibration - PID calibrated by WEV, other  
instruments pre-calibrated prior to receipt by OBG  
(RAM & GM)

DRK

OB = Line - in

AV

OB = Line - in

Hillside Boundary Trenching  
9/15/99 Site L boundary trenching

|                                                                                                             |                      |
|-------------------------------------------------------------------------------------------------------------|----------------------|
| Calibrated on                                                                                               | 9/14/99 (date)       |
| Calibrated by                                                                                               | Wright (sign)        |
| Standards used:                                                                                             | U.S. EPA isobutylene |
| Standards traceable to:                                                                                     |                      |
| Environmental conditions are<br>suitable for measurements & tests <input checked="" type="checkbox"/> for N |                      |

Trench 1 - E boundary

9:35 Photo of first ~6" layer over burden  
PID = 0 @ 9:33

RAM = 0.091 @ 9:37  
(located DW behind soil pile)

4-6 = O<sub>2</sub> 20.9 @ 9:37  
CO 0  
H<sub>2</sub>S 0  
LEL 0

9:41 PID = 0  
4-6 O<sub>2</sub> 20.9  
CO 0  
H<sub>2</sub>O 0  
LEL 0

9:48 RAM 0.110 PID = 0

9:51 0.055 RAM PID = 0

4-6 O<sub>2</sub> = 20.9 others = 0

PID = 0

PID for "bucket sample" = 0.0

10:08 RAM = 0.052

10:25 break for ~10 min photo taken of trench

10:38 resume digging

10:40 UW PID = 0

DW PID = PID @ soil pile = 0

digging deeper near site boundary, into  
clay layer

10:40c PID = 0

RAM = 0.050

4-6 is on continuously w/ alarm set  $\ominus$

LEL = 20%

$O_2 = 20.9$  others = 0

10:55 lay out more plastic sheeting for stages of work

11:03 PID = 0 PID of soil = 0  $\ominus$  ~15'

11:06 RAM = 0.052

RAM

528

11:13 approx. +5.5' to 16' 14' deep  $\rightarrow$  G4/encountered

11:22 RAM = 0.052

11:30... break - decide to take photos of trench and

backfill in this location - Heritage trying to find shorter

11:45 resume digging  $\ominus$  digging less to allow faster work

work  $\rightarrow$  backfilling less, respirators off & staying

UW wind from work since PID = 0 & G4 = 0

monitor for dust using RAM - levels remain

below action levels in UW ~~near~~ worker area

# Tilapia Boundary Trenching

12:30 Tony Lechner arrived on property and viewed the work  
- spoke briefly w/ DEH - a police officer  
left site ~ 1240

1:10 p Operator continues to fill hole, having difficult time  
compacting trench - may have mounting w/ plastic sticking  
out - will try to minimize plastic sticking out  
Solutions may have to take the ~~work~~ sheeting instead  
of putting it all back in hole, since it may not fit  
DEH ~~okays~~ okays this idea - operator will attempt a "clean"  
finish to the hole.

~1:30 p Operator moves off 1<sup>st</sup> trench and moves to  
↳ on E. boundary

- 2<sup>nd</sup> trench location → on W. boundary

~1:35 p Contractor breaks for lunch

~2:05 p " back from lunch, begin setting up  
for 2<sup>nd</sup> trench

Mike w/ Lechner mentions that personnel need to  
be more restricted to exclusion zone w/ ATE on so that  
contractors may want to tape their glove & boot / suit  
joints

DEH passes suggestion about taping joints along the HTR

Dan Hens w/ Heritage will fax a draft change order  
for worker over fence to MHC

Contractor says he will do what he can

Contractor says he will do what he can

Contractor says he will do what he can





## User manual boundary trenching

25

9/16/99

6:30 e Site R

{ Komatsu  
PC150LC7:55 begin digging on N boundary - DE71JWP in  
7:58 stop temporarily to defog JWP's <sup>exc. zone</sup>  
mask

$$PID = 0, 3 \quad 4-G \text{ O}_2 = 20.9, \text{others} = 0$$

JWP's mask does not defog - WEN gets suited up in  
level C

8:14 resume digging - DE71JWP in exc. zone  
(Candy & Art are contractors in exc. zone)

$$8:17 PID = 0.0 UW + DW$$

$$8:18 RAM = 0.05$$

hit GW @ ~14'

8:20 4-G normal

$$8:23 RAM = 0.507$$

$$8:25 PID = 0.0 - 0.3 UW  
0.0 - 0.4 DW$$

4-G normal

8:36 4-G normal

$$RAM 0.198$$

$$PID 0.0 UW + DW$$

~~$$8:45 PID = 0$$~~

~~8:45 PID of wet bottom material = 0~~

~~$$RAM = 0.50$$~~

~~4-G normal~~

~~$$9:07 PID = 0 DW$$~~

~~$$9:12 RAM 0.058$$~~

~~4-G normal~~

~~$$PID 0.0 UW + DW$$~~

# Till Free Boundary Trenching

top material ~ 1' depth is dry & fine  
material below is moist

~28' trench length N-S to discolored material

**12:30** P/D of selected blackened soil + up to 10' open;  
in breathing zone directly S. P/D = 3.0  
"hot" soil volume pulled from trench is minimal -  
approximately by bucket

stop digging a narrow trench, take photos

~100' begin backfilling trench - Moderate of lateral stability  
as formed of active soil

~~soil~~

**12:12** begin on trench 1A, 17'W of trench 1

0.200, others 0

**12:17** P/D = 0, 4-G = normal, RAM = 0.049

**12:22** P/D = 0

4-G = normal

RAM = 0.088

4-G GW/G ~ 13' below grade

**12:30** P/D at soil pile = 0

4-G

RAM = normal

PID = 0

PID on S. - disturbed = 0 " 3.0

in PID reading obtained from disturbed (black)  
soil G and if trench to 0.5 M A = 51.0

100' long backfilling after update + measurements obtained

100' 0.00

# Till Area Boundary Trenching

21

1:10 begin downing exits from Site L + respirator, all other PPE discarded

2:05 move off Site L to Site G, begin clearing brush + trees to allow working area

2:40 excavator will not have enough fuel to do another trench start - to - finish, so it will be used to finish clearing vegetation in Z of the boundary trench locations - the W + N boundaries.

3:00 WEW + JWP leave Site G supplies, charge instruments, etc. Pat remains to watch, assist Lenny (operator)

3:35 Lenny, Pat, + Cahokia PD leave site for the day W, + N, boundaries on Site G are cleared and ready for set-up for trenching

3:45 DEH + JWP leave Site G to field office. WEW remains to locate one additional monitoring well (others have been located and marked while clearing took place) WEW leaves Site G @ ~ 4:00p

4:15 JWP leaves Site G, DEH remains to do paperwork, go through received faxes, etc. Mike Ondrachek of Weston returns to field office - DEH briefs Mike on day's activities and plans for next day. Mike leaves site @ 4:15.

6:00p DEH leaves site

DEH

8  
Site Mea Boundary Tracing  
9/17/99 Site G

0610 DEI, JWP, AJC arrive @ field office, prepare to go to Site G

JWP checks calibration on PID, DEI records RAM

|                                                                                                |        |
|------------------------------------------------------------------------------------------------|--------|
| CALIBRATED ON: 9-17-99                                                                         | (DATE) |
| CALIBRATED BY: JWP                                                                             | (SIGN) |
| STANDARDS USED: 100 ppm Isobutylene                                                            |        |
| STANDARDS TRACEABLE TO: _____                                                                  |        |
| ENVIRONMENTAL CONDITIONS ARE<br>SUITABLE FOR CALIBRATION <input checked="" type="checkbox"/> N |        |

0710 Arrive at Site G, Heritage is present, also Captain P (not OBG @ field office)  $\hookrightarrow$  Lenny Parsons & Lakshmi. Heritage fuels excavator, OBG sets up work zones.

8:00 Begin digging E/W. fill boundary

8:02 PID = 0

RAM = 0.006

4-G : O<sub>2</sub> = 20.9, others = 0

8:07 PID = 0, RAM = 0.020, 4-G = normal

8:10 hit GW @ ~ 14' below grade

8:15 PID = 0, PID on soil pile > 0

4-G = normal

RAM = 0.011

8:22 RAM = 0.014

4-G = normal

PID = 0.0

8:30 P/D=0, 4-G = normal, RAM = 0.061

8:45 P/D = 0, 4-G = normal, RAM = 0.040

stop trenching due to space limitations, take photos & measurements

9:00 Informed Heritage personnel to address OPG employees only, (and no other on-site personnel)

12:09 begin Trench 1A on Site G  
encounter fill material under clay cap; reverse direction of trenching  
P/D = 0 in air + on site

12:30 P/D on ~~orange~~ orange/yellow material = 0  
RAM = 0.031

4-G 0, 20.9°, after 1000 mm  
gravel soil mass 0.01

12:35 P/D + 4-G on yellow material in Site G  
0 normal

12:40 P/D = 0, RAM = 0.167, 4-G = normal

P/D of metal bucket/drum (crushed) = 0  
4-G " " " " = 0.01 m/s

12:52 P/D = 0, RAM = 0.162, 4-G = normal

1:01 P/D in air = 0, P/D in 2 drums = 0

4-G = normal - air & drums

1:04 RAM = 0.195

1:12 P/D = 0

4-G = normal

RAM = 0.026 working

stop digging - running out of excavating space

DU

# Hill Area Boundary Trenching

measure trench, note location of debris, take photos,  
surface / remove drum w/ material inside  
(other removed drums are empty)

Continue air monitoring

PID = 0 , 4.6 = normal , RAM = 0 - 0.50 UW,  
(background reading)

3:05 SH fence installed on trench 1, trench 1A back filled,  
Heritage, OBO, & Cobretoz PD leave site for the  
day

JWP "DE" return to field ofc. to unload truck

DE 74

|                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------|
| CALIBRATED ON: <u>7-20-99</u> (DATE)                                                                                |
| CALIBRATED BY: <u>JWP</u> (SIGN)                                                                                    |
| STANDARDS USED: <u>100 ppm 150 ppm</u>                                                                              |
| STANDARDS TRACEABLE TO: _____                                                                                       |
| ENVIRONMENTAL CONDITIONS ARE<br>SUITABLE FOR CALIBRATION <input checked="" type="radio"/> Y <input type="radio"/> N |

DE 74

21.0 - MIA - HGS

0.09 - SCM

1.00 - CH - 1.0

3.00 - NAA

PID = 0, H-G: normal, RAM = 0.04  
take photos + measure marks, log in both M1, M2

9:45

PID = 0, H-G: normal, RAM = 0.04

9:46

PID on digital meter = 0, H-G: normal

9:47

PID = 0, RAM = 0.08, H-G: normal

9:48

PID on digital meter = 0, H-G: 0.2, others = 0  
PID = 0, RAM = 0.0, H-G: 0.2, others = 0

9:49

log in track 3

9:50

log in both H-G  
take photos + measure marks

9:51

RAM = 0.010

9:52

H-G = normal

9:53

PID = 0 in breathing zone

9:54

H-G: 0.2, others = 0  
PID = 0 in breathing zone

9:55

H-G: 0.2, others = 0

9:56

RAM = 0.00

9:57

PID = 0

9:58

(track 2)

9:59

log in track on All sides of Site G

9:59

left to go across on site (shower @ 6.39)

9:59

RAM (alibata) updated by Q=H

PID (alibata) by JLP

9:59

DEA + JLP @ Site G

9:59

DEA + JLP same as first due to prepare

9:59

9/21/99

## Fill Area Boundary Trenching

1:20 p begin trench 4

Explorer pipeline rep. located petro- pipeline  
on W-side of fence

begin digging 10' W. of pipeline

1:23 PID = 0

4-G:  $O_2 = 20.9$ , others = 0

RAM: 0.204

1:28 PID on yellow powder = 0

~~4-G = 0~~ (normal)

bucket of excavator cleaned (gross dry removal)  
and tracks cleaned before moving to Site H

2:54 begin Site H trench 1, on N side  
(just S. of Queen)

2:55 PID = 0

RAM: 0.079

4-G:  $O_2 = 20.9$ , others = 0

2:56 PID of crushed metal in bucket of backfill  
up to ~ 340 ppm, 4-G = 0

PID down wind of soil pile = 0 ppm

2:03 take photos + measurements; backfill + clean

5:30 Heritage left site for the day

1 min = 0.01 ppm  $O_2 = 0.59$  25.9

1 min = 0.4 ppm  $O_2 = 1.09$  25.9

1 min = 0.4 ppm  $O_2 = 1.19$  25.9

1 min = 0.4 ppm  $O_2 = 1.19$  25.9

9-21-99 DEH

PID &amp; calibrated by JWP

|                                                                                                            |
|------------------------------------------------------------------------------------------------------------|
| Calibrated on <u>9-21-99</u> (date)                                                                        |
| Calibrated by <u>JWP</u> (sign)                                                                            |
| Standards used: <u>100ppm Freon</u>                                                                        |
| Standards traceable to: _____                                                                              |
| Environmental conditions are<br>suitable for measurements & tests <input checked="" type="checkbox"/> or N |

RAM calibration checked by DEH

DEH fit-tested in new Scott respirator by JWP

7:53 begin trench 2 on Site H

7:55 PID = 0

4-G:  $O_2 = 20.9$ , others = 0

RAM = 0.025

01 RAM = 0.024

PID = 0

4-G = normal

8:10 RAM = 0.020

PID = 0

4-G = normal

stop digging

## Hill Area Boundary trenching

9:09 begin digging trench 3 on S side

PD = 0

RAM = 0.018

(rest) no recording

4-G : O<sub>2</sub> = 20.9 , (rest) others = 0

(rest) no recording

(rest) no recording

9:13

PD = 0

RAM = 0.020 , 4-G = normal

9:18

PD = 0

RAM = 0.025 , 4-G = normal

9:25

PD = 0

RAM = 0.018 , 4-G = normal

9:32

PD = 0

RAM = 0.010 , 4-G = normal

9:35

PD on discolored soil = 9 ppm

9:40

PD = 8

RAM = 0.014

4-G = normal

9:47

highest PD on discolored soil = 130 ppm

10:00

Upwind & downwind PD readings = 0

(during back filling of discolored soil)

11:50 Lenny (Lenny Power → left turn) leaves S. 1st & Kinnabell Ferry  
 DEH speaks w/ Kinnabell Ferry abt progress and next  
 truck 2 and S. 1st & Fisher abt S. 1st &  
 LWF + left (lorry) puts up sign "cross up" the teachers  
 that were left with soft material on top  
 12:50 Lenny (operator) goes to S. 1st to "cross up" the teachers  
 decora bucket (dry manual w/ scapar) before carrying away  
 w/ overburden (top ~ 6" - 12")

11:44 PID on disturbed soil = ~ 9.0 ppm  
 RAM = 0.014  
 4-G:  $D_2 = 20.9$   
 working for 4-G:  $D_2 = 6$   
 11:44  $D_{10} = 0$   
 11:44  $D_{10} = 0$

11:34 PID on disturbed soil = 5.0 ppm  
 RAM = 0.025  
 4-G:  $D_2 = 20.9$   
 11:34  $D_{10} = 5$

11:26 began trench 4, S. 1st & Kinnabell  
 11:28 RAM = 0.630  
 4-G:  $D_2 = 20.9$   
 11:28  $D_{10} = 0$   
 11:28  $D_{10} = 0$

36

## Fidd Area Boundary Trenching

9-21-99

silt fence was placed behind trenches on S and W sides of site, and excavator was deconned w/ brusher and water

excavator will be picked up on 9/22 in the a.m., according to Lenny

DETH tried to speak w/ Metro Construction Equip. but door was locked - no one in office

2:05 JWP & DETH go back to field ofc. to unload equip., do paperwork, log photographs, etc.

JWP

11

Sept. 21, 1999  
9 min)

Silt fence placed behind trench - no brusher or water used. No water used to keep soil dry, so nothing to trench over

DEI meets w/ MZ (area of Zambrano Engineering) to discuss GPS + surveying services for the project. Zambrano is showing the different sites that have had sampling performed, slates / maps were given to Zambrano. Long distance, pictures, and existing wells. Long distance locations of wells and sampling / truck / excavators use conventional surveying rather than GPS if a central Pt. is close enough. In some cases, it may be simpler for Zambrano to install GNSS. Zambrano begins surveying and surveying and DEI goes back to field office.

Zambrano will move the ground w/ pink paint and mark the strike with pink paint at ~~middle~~ when they have surveyed the point. This will allow the shaker to remain directly down loaded from the first load if it can be eliminated during drilling during the project. Zambrano will deliver the data in this case if it can be assimilated. Otherwise, the data will be delivered to the laboratory for format only. The data will be converted to DEI well logs or as needed. DEI will cut lots off of existing wells and put new wells on <sup>(Kite)</sup>. Zambrano will be responsible and given a key when this is done.

9-24-99 10:05  
Burrard

00

μg/m<sup>3</sup> porous sampling  
9/27/99 DEH

1000 AJF & DEH arrive @ Site L of Cohokie PD,  
begin setting up excl. & clean zones, taking surface  
soil samples @ B1 - B4

Health & safety monitoring:

PID: 0.0

4-G: normal ( $O_2 = 21.4$ , all others = 0)

RAM: varies w/ surface dust blown around  
in general, background levels are ~0.050  
(downwind)

(above typical @ each surface soil samp. location)

~1130 Go to Site H to collect surface soil samples  
(Driller has not arrived on site)

H&S monitoring @ sample points:

PID = 0

4-G = normal

RAM = varies w/ surface dust

in general, RAM levels are ~0.030 (background  
+ downwind)

(above typical @ each surface soil samp. location)

2

2

2

2

3

3

3

3

measuring samples

39

9/28/99 DEH Site L

Boring P1 @ Site L

2:15 begin advancing P1

initial readings: (in breathing zone)  
unless noted otherwise

PID = 0.0

RAM = 0.086

4-G = O<sub>2</sub> = 21.3, all others = 0

2:25 PID = 0.0

RAM = 0.105

4-G = normal

2:32 RAM upward = 0.085 } during drilling  
RAM downward = 0.092 }

PID = 0.0

4-G = normal

2:39 PID = 0.0

RAM = 0.092

4-G = normal

2:44 HES break until 3:04

(main driller (Mark) had headache suspected to be  
due to tight + respirator)

(respirator adjusted before re-entering exclusion zone)

3:07 PID = 0.0 ; RAM = 0.089 ; 4-G = normal

3:16 PID = 0.0 ; RAM = 0.092 ; 4-G = normal

3:24 PID = 0.0 ; RAM = 0.088 ; 4-G = normal

(windy)

3:42 PID = 0.0 ; RAM = 0.210 ; 4-G = normal

Upcast Boring Sampling

SITESL 9/28/99

3:45 H+S break until 4:05

4:08 PID = 0.0

RAM = 0.128

4-G = normal

4:16 PID downwind = 0.0, upwind = 0.0

L-G downwind = normal, upwind = normal

RAM downwind = 0.193, upwind = 0.209

16:17 RAM forward 0.219 against 0.152

4-Gas downwind = normal upwind normal

Rd upward 0.0 downwind 0.0

16:15 RAM downwind 0.193 upward 0.149

4-Gas downwind normal upwind normal

Rd upward 0.0 downwind 0.0

Leaving sand at  $\approx$  16 feet was not able to collect sample due to  $\approx$  80 sand inside auger

WTR

$$\text{C}_1 = \text{C}_2 - \text{C}_3 \quad \text{C}_1 = 0.19 \quad \text{C}_2 = 0.19$$

$$0.19 - 0.19 = 0.0 = 0.19$$

10:54 began fishing sand bags out - sepias - ~~sepias~~  
 out water,  $\text{PDI}$  maintained

$\text{PDI} = 0.0$  over flushed water/sea

$\text{PDI} = 0.0$  as flushing sea

$\text{PDI}$  ~~di~~  $= 0.0$  during bags on DI

respirators demand while diving bags -  
 ccessories demand while diving bags

$\text{PDI} = 0.0$   $\text{PAM} = 0.0$   $\text{H-G} = \text{normal}$

$\text{H-G} = \text{normal. } (O_2 = 21.0, \text{ air/oxygen} = 0)$

$\text{PAM} = 0.016$

breathing from 16' below ebbing grade

$\text{PDI} = 0.0$

$\text{PDI} = 0.0$  some upward and downward

11:00  $\text{PDI} = 0.0$   $\text{PAM} = 0.024$ ,  $\text{H-G} = \text{normal}$

$\text{H-G} = \text{normal. } (O_2 = 21.0, \text{ air/oxygen} = 0)$

$\text{PAM} = 0.016$

breathing zone while adding air

11:07 leave sterilization zone while adding air / normal

are delivered

11:16 assume start - without divers, augers from bottom  
 and collect sample use sample into jars

$\text{PDI} = 0.0$  over sample bottle (bottom) = 0.0

$\text{H-G} = \text{normal}$  = normal

$\text{PAM} = 0.014$  downward of sample collection

$\text{PDI} = 0.0$  upwind

11:45  $\text{H-G}$  over breathing = normal

$\text{PDI}$  over breathing = 0.0

$\text{PDI}$  over breathing = 0.0

1238 68/3213 73115  
1 1 ~ described

# Maste boring samples

1:53 begin on B2

PID = 0.0

RAM = 0.062

4-G = normal

1:55 PID over hole (breathing zone) = 0.0

2:00 PID over open split spoon = 0.0

2:04 4-G = normal

RAM = 0.047 uw ; 0.050 dw

PSD = 0.0 uw ; 0.0 dw

2:10 4-G = normal uw ; normal dw

RAM = 0.031 uw ; 0.023 dw

PID = 0.0 uw ; 0.0 dw

2:57 4-G = normal uw ; normal dw

RAM = 0.013 uw ; 0.021 dw

PID = 0.0 uw ; 0.0 dw

9:2 PID on 6-8' (see boring log)

2:24 4-G = normal uw ; normal dw

RAM = 0.015 uw ; 0.022 dw

PID = 0.0 uw ; 0.0 dw

2:30 4-G break until ~ 2:45

2:57 collect <sup>water</sup> sample into jars

PID over sample = 0.0

9/30/99 SIZE L DEPT

153 Begin on boring P3

7/7/18 (blows in first spoon)

PID = 0.0

RAM = 0.011

4-G = normal ( $O_2 = 20.6$ , all others = 0)

9:04 PID = 0.0 uw ; 0.0 dw

RAM = 0.011 uw ; 0.011 dw

4-G = normal uw ; normal dw

9:08 PID = 0.0

RAM = 0.011

4-G = normal

} on sample table w/ sample  
interval 6'-8'

9:15 done advancing boring - respirators off

PID over sample bowl and at boring = 0.0

4-G " " " " " = normal

RAM " " " " " = 0.011

9:58 Begin on boring P4

PID = 0.0

RAM = 0.012

4-G = normal

10:04 PID = 0.0, RAM = 0.012, 4-G ~normal over boring

10:10 PID = 0.0 uw ; 0.0 dw

RAM = 0.014 uw ; 0.015 dw

4-G = normal uw ; normal dw

Mete. housing sampling  
9/30/88 G.T.L.

10:23

PID = 0.0

$D_{46} = 0.05$

4-6 = normal

10:30

PID = 1.7 (PID going down)

$R_{46} = 0.017$

} on sample hole

4-6 = normal

10:35

bering stopped; respiratory on over bering, off elsewhere  
PID in heating zone over hole = 0.0 ppm

but ~2' above bering PID = ~60 ppm

10:40

4-6 <sup>(over)</sup> bering = normal

10:45

PID + 4-6 over hole while grinding = 0/normal  
respiratory off

10:50

4-6 over hole = 0/normal

10:55

4-6 over hole = 0/normal

11:00

4-6 over hole = 0/normal

11:05

4-6 over hole = 0/normal

11:10

4-6 over hole = 0/normal

11:15

4-6 over hole = 0/normal

11:20

4-6 over hole = 0/normal

11:25

4-6 over hole = 0/normal

11:30

4-6 over hole = 0/normal

11:35

4-6 over hole = 0/normal

11:40

4-6 over hole = 0/normal

11:45

4-6 over hole = 0/normal

11:50

4-6 over hole = 0/normal

11:55

4-6 over hole = 0/normal

12:00

4-6 over hole = 0/normal

12:05

4-6 over hole = 0/normal

12:10

4-6 over hole = 0/normal

12:15

4-6 over hole = 0/normal

12:20

4-6 over hole = 0/normal

10/01/99 5:13 H 987

22

23 Begin Boring 151 on Site H

$$P/D = 0.0$$

$$R_{AM} = 0.029$$

$$H_G = \text{normal } (C_2 = 20.9, \text{ all others} = 0)$$

$$8:29 P/D = 0.0 \\ 4-G = \text{normal} \\ R_{AM} = 0.074$$

$$8:37 P/D = 0.0 \\ 4-G = \text{normal} \\ R_{AM} = 0.038$$

$$8:44 P/D = 0.0 \\ 4-G = \text{normal} \\ R_{AM} = 0.035$$

$$8:49 P/D over anger = 0.0 \\ 4-G over anger = \text{normal} \\ 9:03 P/D = 0.0 ; R_{AM} = 0.049 ; 4-G = \text{normal} \\ (\text{on sample table} - 15' from boring)}$$

9:07 Stop boring

$$\dots P/D over anger = 0.0$$

$$\dots 4-G \dots = \text{normal}$$

$$P/D @ sample table = 0.041 \text{ (background)}$$

46

# Shale boring Sampling

S. Tech 10/01/99

12:57 begin boring B2

PID = 0.0

RAM = 0.062

4-G = normal

1:02 PID = 0.0 ; RAM = 0.068 ; 4-G = normal

1:10 PID = 0.0 } over angle  
4-G = normal }

1:17 PID = 0.0 ; RAM = 0.071 ; 4-G = normal  
(on sample table)

1:20 Hc S break - decision needed on advancing boring

1:28 begin drilling again

1:33 PID = 0.0  
RAM = 0.101 } on sample table  
4-G = normal }

boring not advancing due to rubber debris

1:43 PID = 0.0 ; 0.0 over angle

RAM = 0.055 on sample table

4-G = normal ; normal (over angle)

1:48 stop boring . suspect bunch of tires - not  
able to advance (or other bunch of rubber debris)

respirator off

Hydro porosus samples

41

10/4/99 SEFT SITEH

8:40 Begin boring RP      Windy + cool, overcast  
PID = 0.0  
RAM = 0.037  
4-G = normal

8:47 PID = 0.0      )  
RAM = 0.075      Soil sample table  
4-G = normal

8:49 PID over auger = 0.0

8:54 PID over auger = 0.0, 4-G over auger = normal  
RAM = 0.046

8:57 PID on sample table dw from split screen = ~4.0  
interval 4-G

9:03 PID = 0.0      )  
4-G = normal      } on sample table  
RAM = 0.056      }

9:09 PID = 0.0      )  
4-G = normal      } Samp. table  
RAM = 0.068      )  
PID dw of auger = 0.0 C = 4' distance

9:21 PID over disposal drum (waste) = 0.0  
PID = 0.0      )  
4-G = normal      } Samp. table  
RAM = 0.049      )

9:28 boring advancement stops to discuss progress w/ driller/geologist  
.34 begin advancement again  
PID = 0.0, RAM = 0.063, 4-G = normal  
Q samp. table

## Hydrogeological Sampling

115 6694701

$$9143 \quad \rho_D = 0.2$$

$$R_{AM} = 0.056 \quad \left\{ \begin{array}{l} \text{emp. table} \\ \text{''} \end{array} \right.$$

$$4-5 = \text{Answer}$$

$$9:52 \quad PID = 0.5 \quad 2$$

$$H = \left( \begin{array}{cc} 0 & 0 \\ 0 & 0 \end{array} \right) \quad \text{Samp. Table}$$

100 Normal

$$10:01 \quad P_{ID} = 0.0 : Etm = 0.063 : 4-1: = \text{normal}$$

15

Step to discuss progress

$$P(D = 0, C)$$

Ran = 0.25  
Scmp. habby

pid over anger (42' diagr) while span going in - 40pm  
10:16 stop baring - keep respirator on over anger + help -  
etc etc

149 Start bearing 174

$$\rho_{IR} = 0.10$$

$RAM = \beta - C\pi$  normal

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$$MD = 0.0$$

$\text{PM} = \text{normal}$  } Samp. stable

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$PID = 0.0$

$y_{t+1} = \text{normal}(y_t)$

1942-020

1900-1901

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四

# Pyreneberg experiment

20

2:09 1Kv of anger ~ 3' white spoon put in :  
 $PID = 0.0$

4-G = normal

2:10  $PID=0.0$

4-G = normal } samp-table  
 $RAM = 0.021$

2:22  $PID=0.0$

4-G = normal } samp-table  
 $RAM = 0.019$

2:29  $PID = 0.0$

4-G = normal } samp-table  
 $RAM = 0.021$

- 2:30  $PID = 0.0$ ; 4-G = normal due ~ 3' from anger

2:38  $PID = 0.0$

4-G = normal } samp-table  
 $RAM = 0.021$

2:46  $PID = 0.0$

4-G = normal } 4' due of anger  
 $PID=0.0$

4-G = normal } samp-table  
 $RAM = 0.022$

2:58  $PID=0.0$

4-G = normal } samp-table  
 $RAM = 0.018$

.08 Stop being - in active material

0:11

$PID=0.0$ ;  $RAM = 0.018$ ; 4-G = normal

Registers off

50

# Akute boeing sampling

16/5/99 Sixth 298

10:40 Begin boeing 82A

 $P/D = 0.0$  $RAM = 0.044$  $4-C = \text{normal}$ 10:50  $P/D = 0.0$  $RAM = 0.045$  $4-C = \text{normal}$ 10:59  $P/D = 0.0$  $RAM = 0.038$  $4-C = \text{normal}$ 11:04  $P/D = 0.0$  $RAM = 0.031$  $4-C = \text{normal}$ 11:14  $P/D = 0.0$  $RAM = 0.030$  $4-C = \text{normal}$  $P/D = 0.0, 4-C = \text{normal} - 3' \text{ dev of angle}$ 11:24  $P/D = 0.0$  $RAM = 0.027$  $4-C = \text{normal}$ 

11:30

 $P/D = 0.0$  $RAM = 0.012$  $4-C = \text{normal}$ P/D = 0.0 - deviation within +/- control 902 80.2  
RAM = 0.012 - deviation within +/- control 0.0 or 0.9  
4-C = normal - deviation within +/- control 13.9

# Waste boring sampling

51

11:47 stop boring - respirator off

2:30p begin boring BS center of site H

$$PID = 0.0$$

4-G = normal

$$RAM = 0.075$$

2:35p  $PID = 0.0$

4-G = normal } on sample table

$$RAM = 0.040$$

2:40p  $PID = 0.0$

4-G = normal } samp. table

$$RAM = 0.020$$

47p  $PID = 0.0$

4-G = normal }

$$RAM = 0.020$$

2:52  $PID = 0.0$

4-G = normal }

$$RAM = 0.019$$

3:00  $PID = 0.0$

4-G = normal }

$$RAM = 0.018$$

3:08  $PID = 0.0$

4-G = normal }

$$RAM = 0.038$$

## Waste boring Sampling

10/5/99 Site H D29L

3:18 P/D = 0.0 }  
 4-G = normal } samp-table  
 $PAM = 0.031$   
 $PID = 0.0$ ; 4-G = normal (~2' dw of anger)

3:20 H+5 break until 3:32

3:35 P/D = 0.0  
 4-G = normal  
 $PAM = 0.025$

3:42 P/D = 0.0  
 4-G = normal  
 $PAM = 0.022$

3:48 H+5 break - discuss progress  
 Stop for the day

$R = 1.4$  Rate  
 $\Delta t = 34$   
 $Y_{eff} = MAG$

# Aggression during pregnancy:

53

10-7-99 Site L DCF

begin boring P5 on site L

$$PID = 0.0$$

$$PAM = 0.210$$

4-G = normal

8:36 4-G = normal /

$$\left. \begin{array}{l} PAM = 0.051 \\ PID = 0.0 \end{array} \right\} \text{Samp. table}$$

8:41 4-G = normal /

$$\left. \begin{array}{l} PAM = 0.024 \\ PID = 0.0 \end{array} \right\} \text{Samp. table}$$

8:50 PID = 0.0

$$\left. \begin{array}{l} 4-G = \text{normal} \\ PAM = 0.018 \end{array} \right\} \text{Samp. table}$$

PID over anger w/ site / chart & 'dope' is peaked @ ~6pm  
 => cap anger to set up to deal w/ hearing tests

8:53 respirators off

breathing zone PID = 0.0 @ boring

9:05 Respirators on, was cap anger

$$\left. \begin{array}{l} PID = 0.0 \\ PAM = 0.012 \\ 4-G = \text{normal} \end{array} \right\} \text{Samp. table}$$

9:16 PID = 0.0

$$\left. \begin{array}{l} PAM = 0.018 \\ 4-G = \text{normal} \end{array} \right\} \text{Samp. table}$$

9:24 PID = 0.0

$$\left. \begin{array}{l} PAM = 0.019 \\ 4-G = \text{normal} \end{array} \right\} \text{Samp. table}$$

Walter's boring Sampling  
Site L 10-2-99 DEP

9:31 PID = 0.0 ; 4-G = normal over anger

PID = 0.0  
RAM = 0.018 } samp-table  
4-G = normal }

9:39 PID = 0.0

RAM = 0.044 } samp-table  
4-G = normal }

9:44 PID = 0.0

RAM = 0.020 } samp-table  
4-G = normal }

9:45 break to discuss progress

10:10 begin again to collect 1 more spoon

PID = 0.0  
RAM = 0.008 } samp-table  
4-G = normal }

10:21 PID = 0.0

RAM = 0.008

4-G = normal

10:27 Stop boring

PID over anger w/ soft chart dropped in = 0.0

respirator off

0.0 - 0.19 WSIP

0.0 - 0.29

1 mm = 0.1

Waste-pouring suspension

00

SITE G 10-7-94

2:13 begin boring B1 on Site G

PID = 0.0

4-G:  $O_2 = 20.9$ ,  $CO = 2 \text{ ppm}$ , others = 0

RAM = 0.009

2:18 PID = 0.0

RAM = 0.012

4-G:  $O_2 = 20.9$ ,  $CO = 4$ , others = 0

} samp. table

2:23 PID = 0.0

RAM = 0.016

4-G:  $O_2 = 20.9$ ,  $CO = 5$ , others = 0

} samp. table

2:28 PID = 0.0

RAM = 0.049

4-G:  $O_2 = 20.9$ ,  $CO = 5$ , others = 0

} Samp. table

2:34 PID = 0.0

RAM = 0.043

4-G:  $O_2 = 21.5$ ,  $CO = 5$ , others = 0

} Samp. table

2:40 PID = 0.0

RAM = 0.029

4-G:  $O_2 = 21.5$ ,  $CO = 5$ , others = 0

} Samp. table

2:42 Stop boring temporarily to discuss progress

2:53 pull center plug from auger, PID = 2.4 (pack)

→ respirator off while not advancing boring

3:15 will grout original boring today and start in new location tomorrow

50

Waste boring Sampling  
Site G 10-8-99 D94

8:35 begin augering at B1 (re bore @ ~5' W. of original BT location, which encountered refusal)  
 PID = 2.6 (expected to be influenced by humidity)  
 4-G = normal  
 RAM = 0.122 (humidity)

weather: overcast & cloudy, -60°F, precip. overnight, ground wet & muddy in places, humid

8:44 PID = 2.9  
 4-G = normal } samp. table  
 RAM = 0.129

8:50 PID = 2.1  
 4-G = normal } samp. table  
 RAM = 0.122

8:55 PID = 1.9  
 4-G = normal } samp. table  
 RAM = 0.118

9:02 PID = 2.9 (going down from last reading = humidity)      <sup>slightly</sup>      <sup>on sample</sup>  
 4-G = normal }      <sup>→</sup>      <sup>=</sup>      samp. table  
 RAM = 0.118

9:07 PID over layer as soon going in = ~4.1 ppm; 4-G = normal  
 PID = ~~2.0~~ 2.0 }  
 4-G = normal } samp. table  
 RAM = 0.112 }

13:08

$$\text{PID} = 11.0 ; \text{H-G = normal}$$

PID + H-G our values as soon going in;

{ sample - tube } H-G = normal

$$\text{RAM} = 0.062$$

{ sample - tube } (going down after last sample reading)

13:12

$$\text{PID} = 0.0 ; \text{H-G = normal}$$

sample - tube } H-G = normal

$$\text{RAM} = 0.067$$

13:16

$$\text{PID} = 0.0 ; \text{H-G = normal}$$

sample - tube } H-G = normal

$$\text{RAM} = 0.069$$

13:10

$$\text{PID} = 0.0 ; \text{H-G = normal}$$

sample - tube } H-G = normal

$$\text{RAM} = 0.076 \text{ ml/cm}^3$$

13:06

$$\text{PID} = 0.0 ; \text{H-G = normal}$$

sample - tube } H-G = normal

$$\text{RAM} = 0.072$$

13:05

$$\text{PID} = 0.0 ; \text{H-G = normal}$$

sample - tube } H-G = normal

$$\text{RAM} = 0.069$$

13:04

all readings acceptable

step down - response off

13:03

$$\text{PID} = 11.0 ; \text{H-G = normal}$$

sample - tube } H-G = normal

(going down slowly after last reading on sample)

13:15

*Hydrogen bonding phenomena*

Aster boring sampling

$$\begin{aligned} 1320 & \quad P1D = 0.0 \\ 4-6 &= \text{normal } \} \quad \text{samp-table} \\ RAm &= 0.063 \end{aligned}$$

1323 stop boring

P1D over anger as soil character dropped in = 0.0  
 $\Rightarrow$  registration off

1323 - 1324 15 5.15 5.15

- 0.0 - MAG.

water = 0.14

1324 - 1325 15 5.15 5.15

0.0 = 0.19

## weathering sampling

59

10/11/99 Site G DE7

:13 begin boring P3

P/D = 0.0

RAM = 0.053

4-G = normal

9:20 P/D = 0.0

RAM = 0.059

4-G = normal

} samp. table

9:27 P/D = 12.0

RAM = 0.068

4-G = normal

} samp. table

→ going down slowly after last sample reading

9:33 P/D = 3.7

RAM 0.047

4-G = ~~normal~~ = normal

} samp. table

→ going down slowly after last sample reading

9:38 P/D = 14.0

RAM = 0.059

4-G = normal

} samp. table

→ going down slowly after last sample reading

9:46 P/D = 15.0

RAM = 0.062

4-G = normal

→ going down slowly after last sample reading

9:50 P/D over auger at center plug going up = 58 pm

P/D in breathing zone of drill bit = 16 pm → ok

4-G over auger = normal

9:56 P/D = 13.1 (going down slowly → )

4-G = normal

RAM = 0.064

} samp. table

With owing Sampling

$$P(D) = 10.4 \cdot (\text{gegenstand steigt} \dots)$$

$$46 = \text{normal}$$

$$\beta_{AM} = 0.057$$

1008 P/D = 12.0 going down .. }

$$\text{for } R_{\text{eff}} = 0.076$$

$C - G = \text{current}$

10:05 Step away + keep respirator on in seal zone

white P.D. goes down..

$$\rho_{10} = 10.1$$

OKU-001 =

4-69 = norme

-6-

PD = ~6 ppm in upwind location away from burning directly over ~~burn~~ = 6.3...; PBM + 446 ± others  
⇒ Respirators often used, except to

put comp. snake in fast

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begin boring P4 on Site G

$$R_{AM} \approx 0.052$$

MD=0.0

RAM = 0.33

220°0' = 140°

PAM-213

116  
117

*normal* = 20

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# $\mu$ /sec. Boring Sampling

1340      PID = 0.0      }  
              RAM = 0.041      } samp-table  
              4-G = normal

1345      PID = 0.0      }  
              RAM = 0.035      } samp-table  
              4-G = normal

1348      H2S break until 1358

1401      PID = 0.0      }  
              RAM = 0.036      } samp-table  
              4-G = normal

1407      PID = 0.0      }  
              RAM = 0.016      } samp-table  
              4-G = normal

1413      PID = 0.0      }  
              RAM = 0.064      } samp-table  
              4-G = normal

1417      H2S break until 1437

1440      PID over anger as spoon going in  $\approx 30$  gm ~~peak~~ peak

1442      PID = 0.0      }  
              RAM = 0.025      } samp-table  
              4-G = normal

1448      PID = 0.0      }  
              RAM = 0.050      } samp-table  
              4-G = normal

## Flute boring sampling

1454  $PID = 0.0$   
 $RAN = 0.015$  samp. to me  
 4-G = normal

1456 H-5 break for driller until 1520  
 1520  $PID = 0.0$   
 $RAN = 0.015$  samp. to me  
 4-G = normal

1527  $PID = 0.0$

$RAN = 0.014$

4-G = normal

1534 PID over auger as spoon going in = 34 ppm peak

1535  $PID = 0.0$

$RAN = 0.028$

4-G = normal

1545 58 ppm boring, have eval. zone for H-5 break  
 1558 re-enter eval. zone off 10' respirator to remove auger  
 PID as auger and driller = 0.0 over boring

1558 = 0.0

1558 = 0.0  
 1558 = 0.0

## pyrene sorption sampling

63

10-12-99 Site G DE7

145 begin boring P4T on Site G

Weather: foggy, overcast, cool

PID = 10.7 (suspected to be influenced by humidity)

4G = normal

RAM = 0.206 (humidity <sup>influence</sup> suspected)

0853 PID = 13.7  
 4G = normal } samp. table!  
 RAM = 0.164 } inf. - snap

0900 PID = 8.6  
 4G = normal } samp. table  
 RAM = 0.127

0908 PID = 4.4  
 4G = normal } samp. table  
 RAM = 0.118

0914 PID = 4.5  
 4G = normal } samp. table  
 RAM = 0.111

0921 PID = 3.2  
 4G = normal } samp. table  
 RAM = 0.101

PID = 3.0 & 4G = normal over auger as center plug sufficient

0928 PID = 2.0  
 4G = normal } samp. table  
 RAM = 0.113

0935 PID = 0.3; 4G = normal; RAM = 0.108  
 on samp-table

# White Berry Sampling

0940 H-5 break until 1000

1000  $PID = 0.0$  $RAM = 0.089$  } samp. help

4-6 = normal

sun coming out, partly cloudy, fog cleared away

1010 P-1 - H-10

4 normal } samp. table  
RAM = 0.0951012  $PID=0.0$ ; 46°; normal auger as soon as broken

1015 PID=0.0

4-6 = normal } samp. table  
RAM = 0.1041022  $PID=0.0$ 4-6 = normal } samp. table  
RAM = 0.113

1030 Stop boring

PID over auger as soil chunk dropped ~ 22pm  
→ respirators on over boring and as collecting sample

1420 begin boring P-5 on Site G

 $PID=0.0$ 4-6 = normal } samp. table  
RAM = 0.050P-11 = normal } samp. table  
RAM = 0.050850 = normal } samp. table  
RAM = 0.192690 = normal } samp. table  
RAM = 0.19

# Waste boring Sampling

cc

1428  $PID = 0.0$  }  
 4-G = normal } samp-table  
 $RAM = 0.040$

1433  $PID = 0.0$  }  
 4-G = normal } samp-table  
 $RAM = 0.061$

1438 -  $PID = 0.0$  }  
 4-G = normal } samp-table  
 $RAM = 0.048$

1444  $PID = 0.0$  }  
 4-G = normal } samp-table  
 $RAM = 0.043$

1450 Mark sits out - respirator not working - face piece  
 is loose - missing a ~~or~~ connection piece ... until not  
 enter elev. zone while boring advances

1456  $PID = 0.0$  }  
 4-G = normal } samp-table  
 $RAM = 0.050$

1457 H+5 break until 1520

1521  $PID = 0.0$  }  
 4-G = normal } samp-table  
 $RAM = 0.054$

1523  $PID = 10 \mu m$  + 4-G = normal as spoon going into auger  
 instruments = 0 / normal in breathing zone

1527  $PID = 0.0$  }  
 4-G = normal } samp-table  
 $RAM = 0.042$

# Whale dung sampling

1535 P/D = 0.0  
 4-G = normal }  
 RAM = 0.146 }

1542 P/D = 0.0  
 4-G = normal }  
 RAM = 0.045 }

1550 P/D = 0.0  
 4-G = normal }  
 RAM = 0.041 }

1558 P/D = 0.0  
 4-G = normal }  
 RAM = 0.079 }

1604 P/D = 0.0  
 4-G = normal }  
 RAM = 0.044 }

1610 P/D = 0.6  
 4-G = normal }  
 RAM = 0.042 }

1619 P/D = 0.0  
 4-G = normal }  
 RAM = 0.044 }

1625 P/D = 0.0  
 4-G = normal }  
 RAM = 0.051 }

1626 At 5 break until 1635  
 4-G = normal }  
 RAM = 0.04 mag

1658

~~Very long~~

cap aquatics in ground! grain → hole formation  
respirators on over benthos, off estuarine

1656 P(D) our aquar as spuds w/ column ~ softer place at  
approx. 3<sup>rd</sup> above grade  
 $P(D) = 0.0$  in benthic zone

1657  $RAM = 0.041$

4-6 = normal

1652  $P(D) = 0.0$

1646  $P(D) = 0.0$   
4-6 = normal } sand filter  
 $RAM = 0.042$

1640  $P(D) = 0.0$   
4-6 = normal } sand filter  
 $RAM = 0.040$

10 *Hydrogeological*

Haste boring sampling:  
 Site I 10-13-98 D820

1420 begin boring B1 on Site ; sunny + windy

PID = 0.0

4-G = normal

RAM = 0.028

1429 PID = 0.0

4-G = normal } Samp table

RAM = 0.021

1430 PID = 0.0

4-G = normal } Samp-table

RAM = 0.013

1441 PID = 0.0

4-G = normal } Samp-table

RAM = 0.025

difficulty advancing boring

1448 break - At 5' + to discuss obstruction in boring until 1455

utilities have been cleared in entire work area according

to Joe Perrings @ 'Cerro' - per phone conv w/ Al Cole ~~driller~~  
driller not able to drill through obstruction

1505 begin boring @ location ~5' E of original B1 location

1510 PID = 0.0

4-G = normal

RAM = 0.015

} Samp. table

1518 PID = 0.0

4-G = normal

RAM = 0.248

} Samp. table

## White-boring Lampshells

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$$\begin{array}{l} \text{1524} \quad P/D = 0.0 \\ \quad 4-G = \text{normal} \\ \quad PAM = 0.031 \end{array} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} \quad \text{Samp. table}$$

$$\begin{array}{l} \text{1532} \quad PID = 0.0 \\ \text{4G = normal} \\ RAM = 0.021 \end{array} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} \text{5 min. table}$$

1538       $PID = 0.0$        $4G = \text{normal}$        $RAM = 0.041$       } same table

1544 P/D = 0.0  
4-L = normal } sample table  
R/M = 0.039 }

49 PID = 0.0  
4-6 = normal  
RAM = 0.036 } Snap-tables

1557  $PID = 0, 0$  }  
 $LGB = \text{normal}$  }  $\rightarrow$  sample table  
 $RAM = 0, 018$

$$1602 \quad \begin{array}{l} PID = 0.0 \\ 4-6 = \text{normal} \\ RAM = 0.011 \end{array} \quad \left. \begin{array}{l} \text{samp.table} \\ \text{...} \end{array} \right\}$$

P10 over auger as spoon going - Odd. 1  
4-6 " " " " = normal 1

1607 P/D = 0.6 }  
4-6<sup>-2</sup> normal } Saenger table  
RAM = 0.017 } S = 86

70

# Waste Boring-Sampling

10-13-99

1614      PID = 0.0  
 4-G = normal }      samp-table  
 RAM = 0.024 }

1621      PID = 0.0  
 4-G = normal }      samp. to 11a  
 RAM = 0.011 }

1625      PID + 4-G out anger as centrifuge going in  
 PID = ~5 ppm peak  
 4-G = normal

1635      PID = 0.0  
 4-G = normal  
 RAM = 0.014

1638      stop boring for the day  
 (need to be off site by 5pm)

~~10-14-99~~      Size I

0838      begin again on boring B1  
 0840      PID = 0.0  
 4-G = normal }      samp-table  
 RAM = 0.063 }

0848      PID = 0.0  
 4-G = normal }      samp. table  
 RAM = 0.076 }

"PID + 4-G out anger as speed w/draw = 0.0 + normal

0.6 + 0.19 = 0.8

0852      Stop boring - respirator not received in initial zone

The German brought out several photos which showed the general boundaries of a different land lying between a German people.  
According to me, the S. section contained no "race" worse and the N. section contained continuous mixture - Germans & etc.  
(not "race"). The thoroughly mixed was the Al. section. Below all  
this location, and 22 in the S. section.

End of burning - pull outers w/o separator based on PDI screening of sample

Stop barking! Call Alie at 46-47455; speak w/ Joe Genna of Lone Copper, who supplies by

$$\left. \begin{array}{l} P_{ID} = 0.0 \\ H_6 = \text{natural} \\ R_{AM} = 0.027 \end{array} \right\} \text{Sand - 76%}$$

$$P/D = 0.0$$

$$P_{AM} = 0.730$$

$$P_{AU} = 0.8$$

$\left. \begin{array}{l} \text{AU} = \text{Normal} \\ \text{AU} = \text{Scalp - Earle} \end{array} \right\}$

$$P(D=0.0) = \text{normal sample size} = 0.027$$

$$P(D = \text{defective} | \text{sample size } n) = \frac{\binom{n}{k} p^k (1-p)^{n-k}}{\binom{n}{k} p^k (1-p)^{n-k}} = \frac{1}{\binom{n}{k}}$$

(b)  $\lim_{n \rightarrow \infty} \int_0^1 f_n(x) dx = \int_0^1 f(x) dx$  (after  $\rightarrow$  convolution)

~~deqir boeing~~

οεοι

# Waste Boring Sampling

1335 begin boring B4

PID = 0.0

RAM = 0.023

4-G = normal

1341

PID = 0.0

RAM = 0.025

4-G = normal

} samp-table

1346

PID = 0.0

RAM = 0.080

4-G = normal

} Samp.table

1354

PID = 0.0

RAM = 0.063

4-G = normal

} Samp.table

1359

PID = 0.0

RAM = 0.023

4-G = normal

} Samp.table

1401

PID = 0.0

RAM = 0.023

4-G = normal

stop boring - respirator off based on samp. screening

1428 begin another boring ~2-3' off B4 to obtain address

Volume for the composite sample

PID = 0.0

respirator off based on results of screening coring

4-G = normal

previous sampling at B4

RAM = 0.019

1434

PID = 0.0

RAM = 0.041

4-G = normal

} Samp.table

1436 Stop boring - stopped 1' from top of 1" core 100' SSW 50 hrs. normal ct.

# Meteoring Sampling

- 1442 begin boring again another ~2.5' away from previous  
boring attempt  
P/D = 0.0  
R/M = 0.020  
4-6 = normal
- 1452 P/D = 0.0      R/M = 0.016      4-6 = normal  
                          } samp-table
- 1458 P/D = 0.0      R/M = 0.025      4-6 = normal  
                          } samp-table
- stop boring - still not enough to composite + collect - offset  
boring again + continue ...
- 1508 begin again ...  
P/D = 0.0      R/M = 0.014      4-6 = normal  
                          } samp.table
- 1515 P/D = 0.0      R/M = 0.025      4-6 = normal  
                          } samp.table
- 1522 P/D = 0.0      R/M = 0.021      4-6 = normal  
                          } samp-table
- 1525 enough sample - stop boring  
                          } "

1645  $P_{ID} = 0.0$   $R_{AM} = 0.158$   
4-G = normal  $\{$  soap. to life  
PDL = 2.5  $\Rightarrow$  PDL = 2.5 per part

1678  $P_{ID} = 0.0$   $R_{AM} = 0.074$   
4-G = normal  $\{$  soap. to life  
 $P_{AM} = 0.027$

1632  $P_{ID} = 0.0$   $P_{AM} = 0.331$   $\hookrightarrow$  down-level of time course in parting  
4-G = normal  $\{$  soap. to life

1626  $P_{ID} = 0.0$   $R_{AM} = 0.033$   
4-G = normal  $\{$  soap. to life  
 $P_{AM} = 0.0$

1615  $P_{ID} = 0.0$   $R_{AM} = 0.015$   
4-G = normal  $\{$  soap. to life  
 $P_{AM} = 0.0$

1610  $P_{ID} = 0.0$   $R_{AM} = 0.00$   
4-G = normal  $\{$  soap. to life  
PDL = 0.0

1609  $P_{ID} = 0.0$   $R_{AM} = 0.00$   
4-G = normal  $\{$  soap. to life  
PDL = 0.0

# Waitt, Jason Sampling

10

1648 stop boring for the day - cop auger & leave overnight

10-15-99 Site I test

0750 ResUME boring DS

$$PID = 0.0$$

4-G = normal } samp. table

$$RAM = 0.040$$

0755 PID = 0.0

4-G = normal } samp. table

$$RAM = 0.057$$

0801 PID = 0.0

4-G = normal } samp. table

$$RAM = 0.051$$

0806

PID = 0.0 } samp. table

$$RAM = 0.040$$

0807 PID over auger as soon as down = 22.5 sec peak

0811

PID = 0.0 } samp. table

$$RAM = 0.032$$

0816

PID = 0.0 } samp. table

$$RAM = 0.030$$

21 PID = 0.0 }

4-G = normal } samp. table

$$RAM = 0.032$$

# Water boring samples

0823 PID over auger as spoon withdrawn = 11 ppm peak

0826 PID = 0.0

4-G = normal

RAM = 0.077

} samp. table

(samp. table at dw from parking lot w/ occasional  
truck traffic)

0832 PID = 0.0

4-G = normal

RAM = 0.029

} samp. table

0838 PID = 0.0

4-G = normal

RAM = 0.034

} samp. table

0844 PID = 0.0

4-G = normal

RAM = 0.040

} samp. table

0850 PID = 0.0

4-G = normal

RAM = 0.034

} samp. table

0852 PID + 4-G over auger as spoon going in :

PID = 49.3 peak ; 4-G = normal

(~2' above  
grade)

breathing zone readings = abt. normal

0853 PID = 0.0

4-G = normal

RAM = 0.044

} samp. table

C.G. = R.I. = 380

0856

H2 So breath sample 0920) SEG-0 = M19

# Wrote every step

0920 PID = 0.0

4-G : normal } } samp. table  
RAM = 0.071 }

0925 PID = 0.0

4-G : normal } } samp. table  
RAM = 0.113 }

0930 PID = 0.0

4-G : normal } } samp. table  
RAM = 0.116 }

0935 PID = 0.0

4-G : normal } } samp. table  
RAM = 0.064 }

140 PID = 0.0

4-G : normal } } samp. table  
RAM = 0.079 }

145 PID = 0.0

4-G : normal } } samp. table  
RAM = 0.078 }

0946 PID in breathing zone over anger as green going in  
 $\approx 0.2$

0950 PID = 0.0

4-G : normal } } samp. table  
RAM = 0.090 }

0955 PID = 0.0

4-G : normal } } samp. table  
RAM = 0.044 }

# Master boring samples

0958 P/D over angle or open center plug w/ drawn  $\approx 5.8$  peak  
4-6 " " " " " " = normal

1000 P/D = 0.0 }  
4-6 = normal } samp. table  
RAM = 0.065 }

1005 P/D = 0.0 }  
RAM = 0.048 } samp. table  
4-6 = normal }

1015 P/D = 0.0 }  
RAM = 0.050 } samp. table  
4-6 = normal }

1025 P/D = 0.0 }  
RAM = 0.084 } samp. table  
4-6 = normal }

1032 Stop boring - respirators on over boring, off elsewhere

0.0 = 0.9 (CP)

0.0 = 0.0

0.0 = 0.0

# Spaccer breathing recordings

10

10-15 sec Site I ~~Site II~~

begin breathing Site II on Site I

$$PID = 0.0$$

DAM = 0.130

4-G = normal

$$PID = 0.0$$

$$DAM = 0.295$$

4-G = samp. false

4-G = normal

$$PID = 0.0$$

$$DAM = 0.073$$

4-G = samp. table

4-G = normal

$$PID = 0.0$$

$$DAM = 0.023$$

4-G = samp. table

4-G = normal

PID over anger as soon going on  $\approx$  2.5 peak

$$PID = 0.0$$

$$DAM = 0.077$$

4-G = samp. table

4-G = normal

1348 4-G reading  $\sim$  3' due of soon going in anger = normal

$$PID = 0.0$$

$$DAM = 0.084$$

4-G = normal

1401 PID in breathing zone or over anger was speech going in = 600 (instantaneous peak S' believe it's general 60)

$$PID = 0.0$$

$$DAM = 0.160$$

4-G = normal Samp. table

S' 1.2A

1.2B

# Water sampling

1418 PRO = 0.0

4-G = normal } samp. table  
RAM = 0.084 }  
PAR = 0.081 }

1419 PRO = 0.0

4-G = normal } samp. table  
RAM = 0.081 }

1416 HES - back water H43

1445 PRO = 0.0  
4-G = normal } samp. table  
RAM = 0.093 }

1453 PRO = 0.0

4-G = normal } samp. table  
RAM = 0.083 }

1458 PRO = 0.0

4-G = normal } samp. table  
RAM = 0.176 }

1505 PRO = 0.0

4-G = normal } samp. table  
RAM = 0.081 }

1510 PRO = 0.0

4-G = normal } samp. table  
RAM = 0.108 }

1515 PRO over angular at spoon going down 31 peak

# Air monitoring sampling

01

5:16 P/D = 0.0  
RAM = 0.089 } Samp. Table  
4-G = normal }

5:18 stop boring ; begin installing monitoring well;  
respirators on over boring until well installed  
" " while collecting composite sample

10-18-99 SITE I DEPT

Date = BDT → Layne ; DEPT → OSG

10:30 drillers begin installation of concrete pad for  
monitoring well - dig hole - 2'x2'x2' deep  
PPE = Level D

10:40 P/D = 0.0 } ambient  
4-G = normal  
RAM = 0.035

10:50 P/D in top of <sup>open</sup> monitoring well ≈ 20 ppm peak  
P/D ~ 1' above open " " = 0.0

~~10:50~~ 4-G at top of open monitoring well = normal  
P/D in hole as digging = 0.0

11:00 P/D = 0.0  
4-G = normal } over open hole + capped monitoring well  
RAM = 0.047

11:45 P/D as drilling down to ~ 3' for installation of  
bumper posts = 0.0 in breaching zone + @ waist level

12:00 P/D @ waist level over open bumper post holes = 0.0  
Stop air monitoring since readings are acceptable

12:15 begin decommissioning remaining auger and rig - modified (level D)

waste during sampling  
Site I 10-18-99

work for decom activities

1330 monitoring well pad and bumper posts completed substantially

driller returns to Site R (field office) to refill water tank on decom steam cleaner  
driller also gets fuel for steam cleaner

~~1400~~

~1500 Joe Purrroughs of Cerro Copper comments that the bumper posts should be painted for greater visibility

1635 decom pad disassembled, Layne + DEH leave site, go to field ofc.

drill rig, augos, rods, etc. cleaned; drums staged and marked at Site I

Layne leaves 8 empty, unused drums at field ofc., per request of APC; they took the remaining drums back with them

10-19-99 DEH

Put locks on monitoring wells LEACH-G and LEACH-I;  
(magistrate  
sent by court) spray-painted bumper posts around LEACH-I; assisted DEH briefly at Site L; logged PPE drums at Judith Lane; inventoried drums which need to be moved from Sites G, I, & L



- 3:45 pm

Continue pumping out door lynch @ Judd's La until

Water for DEH & DST @ 12:50 - 1:25

After being left alone longer @ 11:45 a.m. DEH + DST remain @ Judd's La. To pump out door lynch  
dum

Decisions by Come/Selby on transport & man/leaving  
to Come's place staying over Sunday a.m. planning a  
Dum's at Site I (Come's corner) were moved by Hertelage  
down weather dum's, from Lefebvre also it @ Judd's La.  
Last staying time: DST remains @ Judd's La. pumping out  
dum's from Site G & L were placed at the Judd's  
Dum's were loaded from Site L after and from all  
is same.

Log as they were loaded on Hertelage's truck.  
Dum's were loaded on the last truck  
for Ken Laferty's request, dum's were given a number before  
going to Site G w/ Hertelage to move to load dum's.  
All conductors set by something, then DEH + DST

Moving dum's from Site G, L, & I

15. 2 After being worked some at field of. for

10-22-49  
After being worked some at field of. for

unpublished man 201 sampling transects

10-25-99 DEH.

0800 Safety mtg for day's activities

0810 08 DEH + TPT go to visit transect locations to review layouts

~1000 09 Mark Green of Zambrano called DEH, had arrived at Site H to survey new points. Mark was asked to start at Site L and move to Site H, then call DEH ab. other pts. DEH briefly described some of the other points to be surveyed.

~1045 10 DEH + TPT return to field ofc to discuss layouts w/ Kimberly Perry

~1130 11 Leave field ofc to review transect access locations; Kimberly Perry, DEH, + TPT

1300 12 Return to field ofc

1400 13 DEH, N. Jenkins, + Calahan PD go to layout transect 2, then to transect #13

1400 14 Transect 2 came out to 5 stakes @ 8200' spacing; since PSP says 6 samp. locations @ transect 2, the spacing + layout need to be redone on 10-26-99, per Solutia

1400 15 Methodology in general for spacing transect samples:  
divide total distance by # of samples on p. III of PSP  
field to get

1735 16 Complete transect #13 in staking  
spacing = 166', 7 stakes

10-26-99 DEH

0730 Safety meeting

(DEH, N. Detour, Calokra PD).

0745 Move to transect 2 to redo the spacing of stakes  
6 stakes @ 176' spacing0830 Move to transect 5 to set 5 stakes  
6 stakes @ 191' spacing1015 Move to transect 7 ; Calokra PD lags behind  
and does not find OBG personnel - goes to field office ;  
Ken L. returns to DEH for location to send Calokra PD1045 Tim informs DEH that Cerro Copper has moved some  
trucks on the N. end of the truck parking area ;  
Tim, DEH, & Mick move to Cerro Copper1100 DEH + Mick wait for Tim @ Cerro ; Tim is stuck behind  
a train1130 Tim arrived ; discuss what progress could be made while  
area is cleared ; since magnetometer grids appear to  
be well worked, no further working is needed - soil gas  
survey grids can be superimposed on existing.1140 DEH + Mick take lunch ; happen to meet Mark Green  
of Zambrano @ lunch - discuss his progress + future  
activities for surveying~~1220~~ 1245 Colin of OBG meets DEH + Mick in field ; move  
to transect 6 ; 5 stakes @ 220'~~1220~~ 1315 DEH leaves transect 6 to meet Mark Green ; show  
Mark additional points to be surveyed.1400 DEH meets Colin + Mick near transect 1 to begin layout  
P.M.

1530 DEH leaves w/ Mark Green to go to field office to make

## Undeveloped Area Soil Sampling Transects

10-26-99

a copy ~~not~~ for Mark of sample pts. to be surveyed

1600 DEH returns to transect 1; Colin + Nick are almost done laying it out

7 stakes @ 163' spacing

1630 DEH, Colin, + Nick go to Site N area to review transect 4 layout for tomorrow

1700 They come back to field office.

10-27-99 DEH

0730 Safety meeting; discuss plans for the day.  
Go out to Site N area w/ Colin, Ken L., + Kimberly  
P. to discuss layout of transect 4 + any clearing  
needs; issues resolved and DEH + Colin begin clearing  
and setting up to lay out transect 4

~1045 Kimberly spoke w/ Bruce (Solutia) and decided that transect 4 could go over Site N instead of where it was originally planned; near the berm/tree line on the North side of Site N - this would allow an easier lay out of the transect

DEH noted that although transect layout would ~~be easier~~  
over Site N, the purpose of transect samples was to assess

impact due to sediment + dust transport from Dead Creek.  
This purpose may not be met if samples are collected  
on Site N, which is a fill area (and will be sampled  
any way) - for example, if impact is found in a <sup>213</sup>  
sample ~~from~~ <sup>213</sup> to Site N, will it be attributed to creek  
transport + dust, or fill in Site N?

→ ~~or fill in Site N?~~ → ~~or creek~~ → ~~or creek~~

Undeveloped Area does not require transects

Kimberly relayed a message of this nature (DEH's concern)  
to Bruce

OBG will work on other transects until Bruce responds

1115 Begin re-doing lay out of transect 6 of Jerome;  
stakes are <sup>now</sup> not to be in the <sup>gavel</sup> plot or have a  
spacing greater than 200', per Kimberly  
5 stakes @ 181' spacing

1220 Break for lunch; send Cahokia PD to lunch; done w/  
transect 6

1245 Kimberly spoke w/ Bruce (Seduto) and w/ Erik Kemper of  
Weston about the location of transect 4 off Site N -  
they were both "okay with the location" as discussed previously  
w/ DEH + Kimberly + Ken

OBG will lay out transect 4 accordingly

1255 ~~OBG~~ Begin layout of transect 7 near ~~the~~ Parks College.  
Location is along fence/below water part on N. side of  
soybean field - okayed by Kimberly  
Transect is not to go onto apt. complex property

1450 7 stakes @ 160' - transect complete  
move to transect 4

1515 call Kimberly to confirm transect location due to  
piles of debris E. of a site bldg, along a dirt road  
Kimberly + Ken came to site + confirmed location & growth  
(front passenger side)

1545 Notice leaking tire on gold rental truck; DEH worker  
on changing tire + Colin and Nick began transect  
layout

1640 tire changed + transect 1 laid out; 5 intervals @ 200'; last one  
7 stakes total is 178'

## Undeveloped Area Soil Sampling Transects

10-28-99 JZ

0800 Safety mtg + weekly forecast w/ Tim T., Nick J., +  
DEH of OBG, Kim L. P. of Solutia, + Ken L. of Marrett

0845 DEH + Nick go to Site N to adjust spacing on  
transect 4

7 stakes @ ~196' spacing

0915 Leave Site N, go back to field ofc.

discover red rental truck has flat tire @ 60 - Nick  
changes tire - rear passenger side

DEH assists + cleans out rental trucks for return prep.

1030 DEH + TPT leave field ofc. to meet w/  
be Burroughs C Cemo regarding magnetometer survey  
continuance, geoprobing for saturated thickness samp., and  
soil gas survey next wk.

Nick leaves to go to Firestone dealer regarding flat  
tires on 2 rental trucks (to be billed to Budget,  
according to TPT who spoke w/ Budget roadside assistance)

1125 DEH + TPT return from Cemo; discuss tasks for  
today, tomorrow) & next wk

1230 TPT leaves site - will go back to OBG office

1245 Nick returns to field ofc.; one of the new tires  
is on the rim backwards so white lettering is facing  
Wrong way - Nick calls the tire place and returns  
to have this corrected

1400 Nick returns; also received estimate of \$45 per truck  
to have them washed + sides buffed to remove scratches  
before returning them to Budget for lease renewal - tomorrow  
morning will wait to bring them in

see: 10-28-99 Trans. + records sent off  
Total waste F

# Underdeveloped Headwall Sampling Transects

89

Nick inventories sample bottles • DEH works on photos and deleting camera disks

1700 OBG teams for the day

10-29-99 JCH

0730 Safety meeting w/ Kimberly P., TPT, Nick, & DEH  
begin organizing/cleaning and other admin + support tasks  
at field office

1000 DEH meets w/ Explorer pipeline rep. - has him mark pipeline  
location N. of Judith - 1000' and E of Rt. 3 to the  
creek (in Row N. of David St.)

Nick / DEH prepare sample coolers for GU sampling  
until samp-bottles run out.

Nick / DEH have rental trucks detached to take out  
side scrapers due to weeds  
DEH & TPT review transect locations

1420 DEH & Nick leave to return trucks + renew leases &  
go to OBG ofc ; TPT stays to do paperwork

Q815 - Safety entry for moving to another station  
Q816 + Next bulletins of Q816 go to  
Site I - Surveyor from Zouba meets them  
and gets "coming up" on Site I  
"Q815 Prep instructions for soil tests +  
dust gradation + alluvium aquifer sampling  
IBU, AC, TPI, DEH, KU, Lafferty, Kinsler, Petty,  
FSP, KMP, etc (Soil test 52) discusses soil types  
but Site A Address (Ex. south of far south)  
Q815 comes up concerning calibration of GC  
and the soils in a ~~different~~ <sup>for</sup> FSP:  
FSP next (Soil test 52) discusses soil types  
as screening to get XRI/LBC results,  
but Site A Address (Ex. south of far south)  
LBC - ~~soils~~ (prior test 1/16); the  
GC and MP is at "collected" port; but  
choose for paper response - the result  
gives it not a chance than a possibility  
(for example) but a quantity relative to a  
baseline which can be compared to after  
results to suit the purpose of the field LLC  
soil same area, etc.; the GC will strip in  
soil screening and point out "hot spots",  
not likely to be seen prior to a  
screening and point out "hot spots";  
of 1/16 with have an appearance to 50% fine  
to the field off. to be calibrated by the  
FSP later and "replace" ~~it~~  
B86 to F71 our destination long  
after Q816 has cont. (11/11 w/ same file, ~~etc~~)  
KuL, AC, DEH, TPI, + KU, Lafferty to discuss  
destruction - after discussion, three options

Downgradient Alluv. Ag. Sampling:

John U. brought up the question of whether we could push to depth first and sample on the way out to save time or if we needed to sample on the way down as written in the FSP

The group had extended discussion about this idea and decided to sample on the way down as planned for at least today, until Bruce Yare could be contacted

~~Bruce was to far contacted~~

Safety mtg was held for this activity and LER + IPS worker (Dan?) started mobilizing from field office to locations N. of Judith Lane

Bruce Y. was later contacted concerning John's idea; after extended discussions, Bruce decided that sampling should occur on the way down, as described in the FSP

After discussion w/ Bruce concerning Soil gas survey & downgradient all. ag. sample, DTH, Dan Miller, + John U. go to Site I to lay out grids for soil gas survey

11:00 lunch ~ 45 min

have safety mtg. for soil gas survey + finish prep. in sp. mtg. for soil gas survey

get to Site I w/ John U.

cloudy + overcast ~ 70°F → humid + patchy light rain

0910

reaching take at SG-I-02

$$P(D) = 0.0 \quad ; \quad h - C = \text{normal}$$

IPS gets new rods and sets up to the date SG-I-02

0835

to "the place" through the doors  
rods from others IPS was (during decommissioning all the stuff)

from where the rods in sub surface - need to get power

$$P(D) = 0.0 \quad h - C = \text{normal} \quad \{ \text{breaking some rods}\}$$

$$P(D) = 0.0 \quad h - C = \text{normal} \quad + \text{possible gamma}$$

IPS sets up on SG-I-02

0810

make will survey the grid

0826 2071 grid and this area for my survey:

"old Disney" is clear of trees? (all) of

Jambon → make great also at SG-I : south of (jambon)

DEH → Jau U + SG-I

0820

→ IPS

SG-I

Safety survey for day's task

~450' clear + width.

22 Nov 99 8:30 SG-I

Leave some letters for day - IPS (Jau U) → DEH

$$P(E) = \text{mod } D$$

$$- P(D) = 0.7 \quad \{ \text{open} \} \quad \text{was passing over}$$

$$C_G M = \text{normal} \quad \{ \text{breaking zone}$$

Begin date SG-I-01

1625

IPS sets up near SG-I-01 (Jau U end)

1600

Nov 99 8:30 SG-I

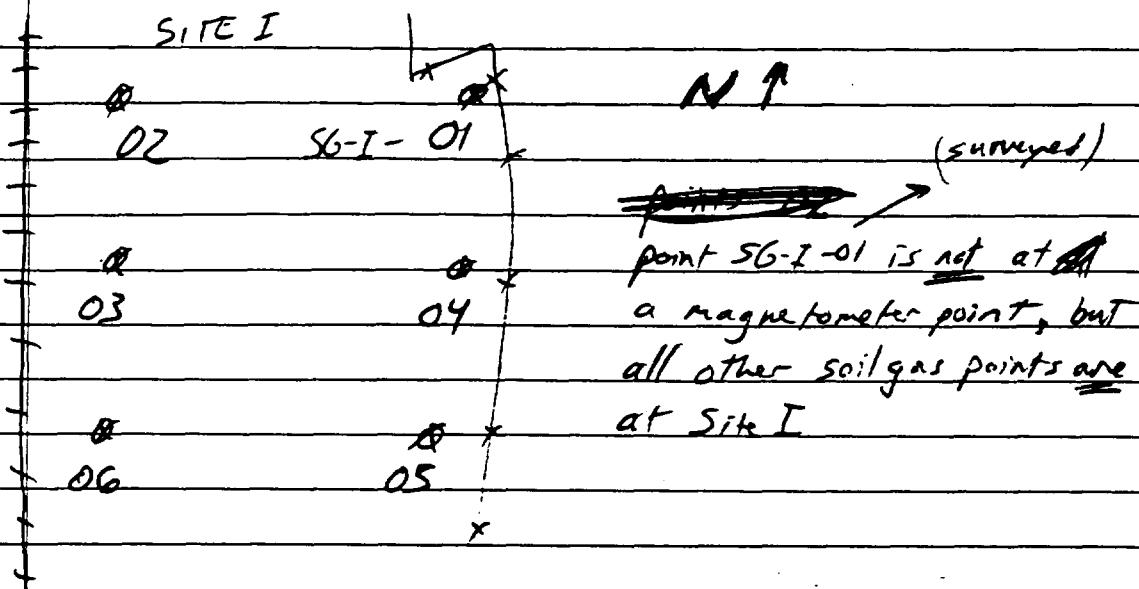
Zulu time

0920 Set up at SG-I-03  
PID = 0.0 4-G = normal

0930 reading taken at SG-I-03  
PID = 0.0 4-G = normal (in breathing zone)

0940 Set up at SG-I-04  
PID = 0.0 4-G = normal

Nomenclature for soil gas points:



0948 take reading at SG-I-04  
breathing zone : PID = 0.0 , 4-G = normal

0955 set up on SG-I-05

1003 PID = 0.0 4-G = normal

1005 reading taken at SG-I-05  
breathing zone : PID = 0.0 4-G = normal

|      |                                               |                                                          |
|------|-----------------------------------------------|----------------------------------------------------------|
| 1010 | Set up at SG-I-06                             | PID=0.0 $y-C = \text{normal}$ (as pre-prepared solution) |
| 1011 | Reading tube at SG-I-06                       | PID=0.0 $y-C = \text{normal}$ in breathing zone          |
| 1012 | Set up at SG-I-06                             | Prepared at SG-I, as will move to SG-II                  |
| 1013 | Feeding down at SG-I ! no more soil/gut grubs |                                                          |
| 1014 | Set up at SG-H-01                             | Kumba Party is observing set-up day by U. students       |
| 1015 | Set up at SG-H-01                             | Observation of probably GC                               |
| 1016 | Reading tube at SG-H-01                       | PID=0.0 $y-C = \text{normal}$ in breathing zone          |
| 1017 | Set up at SG-H-01                             | Set up as SG-H                                           |
| 1018 | Set up at SG-H-01                             | PID=0.0 $y-C = \text{normal}$ in breathing zone          |
| 1019 | Set up at SG-H-01                             | Set up as SG-H                                           |
| 1020 | Set up at SG-H-01                             | PID=0.0 $y-C = \text{normal}$ in breathing zone          |
| 1021 | Set up at SG-H-01                             | PID=0.0 $y-C = \text{normal}$ in breathing zone          |
| 1022 | Set up at SG-H-01                             | PID=0.0 $y-C = \text{normal}$ in breathing zone          |
| 1023 | Reading tube at SG-E-06                       | From y. depth                                            |
| 1024 | Set up at SG-E-06                             | PID=0.0 $y-C = \text{normal}$ (as pre-prepared solution) |

having met you

- for full history
- 1210 hours on MP not turned on - will come back to this location after lunch and reprobe
- 1230 spoke with Jim Lillis ab. progress of many studies and at other activities
- 1300 return to Site A to continue soil gas survey
- 1315 began probing again at SG-H-04
- 1325 reading taken at SG-H-04
- 1335 set up on SG-H-05  $\rightarrow$  location is N-S, NW of past site  
91 ft
- 1337  $\text{PID} = 0.0 \text{ H-C} = \text{normal}$  as probeable w/return from A.
- 1342 take reading at SG-H-05  
(and in-line)
- 1355 set up on SG-H-06
- 1400  $\text{PID} = 0.0 \text{ H-C} = \text{normal}$  as probeable w/return from A.
- 1410 take reading at SG-H-06
- 1417 set up on SG-H-07
- 1429 take reading at SG-H-07
- 1441  $\text{PID} = 0.0 \text{ H-C} = \text{normal}$  as probeable w/return from A.
- 1448 take reading at SG-H-08
- 1451 PID in hole after probe w/draw = 0.5 ppm peak
- close up of Site A soil gas (not including transects)
- move to Site 1

# Soil gas survey

1525 set up on SG-L-01 at approx. center of site

1535 take reading at SG-L-01

~~1535~~ PID = 0.0 4-G = normal in breathing zone

1539  $\hookrightarrow$  = 0.0 in hole after probe removed

done w/ Site L <sup>soil</sup> gas (not inclining transects)

1545 arrive at Site N - look at positioning for soil gas probe - discover that 2 soil gas grids would be possible, instead of only 1 as shown on figure in FSP

• 1600 IPS leaves for the day; DEH talks w/ surveyor -  
also speaks w/ Party Black

1630 DEH leaves Site N, goes to field ofc to do paper work, etc.

DEH discusses Site N soil gas points, due to size of area - result  $\Rightarrow$  take 2 soil gas samples on Site N (see FSP p. 38)

Kimberly also approves lay out of soil gas points on Site G

09

09

09

09

100

101

101

103

103

104

~~Safety~~ ~~Site Survey~~  
03 NOV 99 DEH

97

Safety mtg for day's activities : GW sampling  
(2 crews), mag survey, and soil/gas survey

Discussion of mag. survey w/ Dan Willis at OBS G, K. Perry,  
ASC, DEH, Ken L., + Eric K. - informal

Discuss soil gas results to date and possibilities for  
transect work for soil gas - ASC + K. Perry to  
further investigate locations of transect sampler  
and access issues

0915 DEH + John V. (IPS) arrive at Site G, set up  
on SG-G-01 ; clear + cool =  $45^{\circ}\text{F}$

0930 PID in hole after preprobe removed = 5.4 ppm peak  
PID = 0.0 4G = normal in breathing zone

0935 take SG reading @ SG-G-01

0940 PID in hole after probe / MIP removed = 55.5 ppm peak  
PID = 0.0 4G = normal in breathing zone

0950 Set up on SG-G-02

preprobe refusal 3 times ; 4th time no preprobe refusal

1005 PID = 0.0 4G = normal in breathing zone

PID in hole after preprobe w/drawn = 1.7 ppm peak

1010 take SG reading @ SG-G-02 ; refusal @ ~ 4.8' below

1018 PID in hole after MIP removed = 1.1 ppm peak grade

PID = 0.0 4G = normal in breathing zone

1030 Set up on SG-G-03

1033 PID in hole after preprobe w/drawn = 14.4 peak

12 take SG reading at SG-G-03

1047 PID in hole after MIP w/drawn = 2.1 peak

PID in breathing zone = 0.0 ; 4G = normal

## Soil Gas Survey

3 NOV 99 DE 84

1048 re check response of MIP - response is okay

1058 Set up on SG-G-04

1102 PID in hole as pre probe w/drawn = 0.5 ppm peak  
PID = 0.0 4-G = normal in breathing zone

1108 take SG reading at SG-G-04

1112 PID = 1.6 peak in hole after MIP w/drawn  
PID = 0.0 4-G = normal in breathing zone

1124 Set up on SG-G-05

1127 PID in preprobe hole = 11.5 peak

PID = 0.0 4-G = normal in breathing zone

1132 SG reading taken at SG-G-05

1136 PID in MIP hole = 7.8 peak

PID = 0.0 4-G = normal in breathing zone

1148 Set up on SG-G-06

1152 PID in preprobe hole = 17 peak

breathing zone: PID = 0.0 4-G = normal

1156 SG reading taken at SG-G-06

1202 PID in MIP hole = 1.7 peak

breathing zone: PID = 0.0 4-G = normal

(John H.)

1215 go to lunch w/ IPS plan to meet ASC

at Site H ~ 1pm to go over soil gas transects

1305 arrive at Site H w/ IPS

1310 ASC arrives, shows John U. + DEH transect

locations for Site H and Site L; discuss

progress w/ soil gas survey and soil gas grid layout

Discuss mag. survey w/ Dan Wilho, ASC, DEH, and

Nick Sorking - Dan points out function and use

of magnetometer to those present



04 Nov 99

Golf Test Driving

Q919 Dm U1115 return from field off Hwy 10. W/ stakes + points to mark  
 26 points total have not been surveyed

Q747: this  
 drawings for U1171, etc - there may be an issue  
 that we do not want - the 10/11 check  
 security bldg - the same having the van from  
 and open bldgs - in road between stakes and  
 location of SG-I-12 is also in way out as U1171 etc  
 DEH stands by Joe Bunning to verify that the

breathing zone :  $PID = 0.0 \quad H-G = \text{normal}$

Q902 PID in MRP hole = 3.5

Q859 take SG reading at SG-I-11

Q855 PID in breathing zone  
 $PID = 0.0 \quad H-G = \text{normal}$

Q855 PID in probe hole = 13.4

Q855 probe the floor in 2 places - no result / 1st time

Q845 Setup on SG-I-11

breathing zone :  $PID = 0.0 \quad H-G = \text{normal}$

Q840 PID in MRP hole = 0.4

Q835 take SG reading at SG-I-10

Q830 breathing zone :  $PID=0.0 \quad H-G = \text{normal}$

Q825 Setup on SG-I-10

breathing zone :  $PID = 0.0 \quad H-G = \text{normal}$

Q819 PID in MRP hole = 0.8

Q815 take SG reading at SG-I-07  
 (earlier w/ car)  
 $PID = 0.0 \quad H-G = \text{normal}$  in breathing zone  
 (earlier - marks)

Q806 PID = 2.1 in probe hole  
 (Dm U115 etc)

Q800 IPS set up on SG-I-07

Q750 DEH • b/w U.(SIP) answer on Site I  
 Survey ~ 50ft

Solo/try myth for day's activities

# Soil Gas Survey

101

- 0920 Set up on SG-I-08  
 929 take SG reading at SG-I-08  
 0933 PID in MIP hole = 0.1  
 breathing zone: PID = 0.0 4-G = normal
- 0938 Set up on SG-I-09  
 DEH + Dan Wills discuss transect layout on Site G  
 Dan goes to find Joe Burroughs + later layout  
 Site G soil gas transects  
 0950 take SG reading at SG-I-09 } IPS suspects  
 0954 PID in MIP hole = 0.8 } methane  
 breathing zone: PID = 0.0 4-G = normal
- 1005 DEH + Joe Burroughs discuss location of SG-I-12 → moved slightly in  
 1010 Set up on SG-I-12 → utilities okay + location okay  
 1024 take SG reading on SG-I-12  
 1026 PID in MIP hole = 4.4  
 breathing zone: PID = 0.0 4-G = normal  
 (AJF & Harris arrive on site) →  
 1030 Set up on SG-H-NW 0+00  
 1040 Pre probe rod breaks; Erik Komper arrives on site  
 1045 DEH goes to other IPS van (<sup>van</sup> w/ LEW) to get more preprobe rods; Dan Wills arrives from Site G  
 1105 DEH returns to Site I w/ preprobe rods  
 1115 take SG reading at SG-H-NW 0+00  
 breathing zone: PID = 0.0 4-G = normal  
 1120 PID in MIP hole = 4.1 ppm peak  
 breathing zone: PID = 0.0 4-G = normal
- 1125 Set up on SG-H-NW 1+00  
 1132 breathing zone: PID = 0.0 4-G = normal  
 1133 take SG reading at SG-H-NW 1+00  
 1137 PID in MIP hole = 0.1  
 breathing zone: PID = 0.0 4-G = normal  
 1155 leave Site I for lunch → IPS, Erik K, DEH + Dan Wills

LNU

## Soil Gas Survey

04 NOV 79

DEH

1200 DEH & Dan Weller set up soil gas transect line of Site G

1220 DEH & Dan take lunch

1300 DEH meets surveyor at Site L - discusses points to be surveyed

1330 IPS, Erik Kasper, and Dan Weller return from lunch

1338 IPS sets up on SG-L-E 0+00 (on Site L)

1343 PID in probe ~~1/2~~ = 0.7

1348 take SG reading at SG-L-E 0+00

1353 PID in MIP hole = 0.7

breathing zone : PID = 0.0 4-G = normal

1355 DEH notifies M. Rupinski (of Keeley Const.) that soil gas transects SG-L-E 100 + 200 will be performed and shows him where they are located

1400 Set up on SG-L-E 100 → near junk pile

1410 take SG reading at SG-L-E 100 on Keeley prop.

breathing zone : PID = 0.0 4-G = normal

1415 PID in MIP hole = 1.9 feet

1420 setup on SG-L-E 2+00 → near salt pile  
on Keeley property

1423 refusal @ ~ 2.5' w/ preprobe

1428 PID in preprobe hole = 1.8

breathing zone : PID = 0.0 4-G = normal

1433 take SG reading @ SG-L-E 2+00

PID in MIP hole = 1.6

breathing zone : PID = 0.0 4-G = normal

... = 0.0 4-G = normal

# Soil Gas Survey

- 1450 Set up on SG-L-S 0+00 (soybean field)  
1455 breathing zone : PID = 0.0 4-G = normal  
1459 take SG reading at SG-L-S 0+00  
1503 PID in MCP hole = 0.0
- 1507 Set up on SG-L-S 1+00 (soybean field)  
1511 take SG reading @ SG-L-S 1+00  
breathing zone : PID = 0.0 4-G = normal
- 1519 Set up on SG-L-S 2+00 (soybean field)  
1523 breathing zone : PID = 0.0 4-G = normal  
take SG reading @ SG-L-S 2+00
- 1540 Set up on SG-L-W 0+00 (on Site L)  
1550 measuring cable for soil/gas reading/marization (on Geoprobe rig)  
broke - further soil gas readings are not possible w/o  
this - IPS phoned an order to fix this item ASAP
- 1615 DEH + John U leave Site L  
IPS Leaves for the day  
DEH goes to field office.

05 Nov 99 JGH

Safety mtgs for day's activities - personnel leaves to do  
GW sampling - ~~all~~ John of IPS leaves to wait on / prep  
up delivery of part needed to fix GC/MCP Geoprobe  
unit

~~All~~ ASC & DEH re-program mobile phones to allow  
"direct connect" access to Solutia phones

ASC, K. Perry, & DEH visit E. soil/gas transect off Site I  
so K. Perry can begin on access issues there ; also note  
that trucks are cleared on Site I to allow further mag-  
survey work - however, Dan Willis has gone + Colin W. is ill,  
(back to Rating)

65 NOV 99  
Sofia's journal

so "max power" issues prevent immediate start

as my understand starts - AJC will begin mag. work

today, may need help laying out grids

AJC & L. Puri return to final site.

AJC goes to Toy Fair. BN Wright to present

their photo softings

~ 1030 down U. of PS returns w/ CCF unit

ready to go

1105 set up on SG-L-W000 (on S2L)  
1106 set up on SG-L-W000 (on S2L)  
1107 PID = 0.0 in MP hole  
1108 take SG reading + SG-L-W000  
(same part was broken on 04 Nov 99)

1109 set up on SG-L-W000 (on S2L)

1115 set up on SG-L-W000  
1124 take SG reading (0 SG-L-W000  
(on max count. position))

1127 PID = 0.0 in MP hole  
1128 take SG reading (0 SG-L-W000  
PID = 0.0 4-G = normal in breathing zone

1131 set up on SG-L-W100  
1139 take SG reading (0 SG-L-W100  
PID = 0.0 4-G = normal in breathing zone)

1141 PID = 0.0 in MP hole  
1146 set up on SG-L-W200  
1150 take reading (0 SG-L-W200  
breathing zone; PID = 0.0 4-G = normal)

1155 PID = 0.0 in MP hole  
120 both U. gear to back

120 DEH to Sofia to assist AJC in laying out grids

# Soil Gas Survey

100

1345 DEH returns to Site L area ~~area~~; IPS is back from lunch already; AJC is beginning mag. survey at Site I

1350 Set up on SG-H-SW 0+00 (mini storage)

DEH checks w/ Tony Lechner of Metro Const. ab. utilities. Tony said there is a small diameter water line which runs from Metro Construction thru the mini storage all the way to Falling Spr Rd. - Tony showed DEH the approx. location of the line - SW of storage bldg approx mid way btwn bldg + fence, approx. parallel w/ fence

1403 take SG reading @ SG-H-SW 0+00

breathing zone: PID = 0.0; 4-G = normal

1408 PID in MIP hole = 0.0

tube on end of PID broke off. - John U. has tools to fix it - fix PID tube

125 Set up on SG-H-SW 1+00 (mini storage)

1434 take SG reading @ SG-H-SW 1+00

breathing zone: PID = 0.0 4-G = normal

1437 PID in MIP hole = 0.0

1443 Set up on SG-H-SW 2+00 (mini storage)

1449 take SG reading @ SG-H-SW 2+00

breathing zone: PID = 0.0 4-G = normal

1453 PID in MIP hole = 1.7 peak

1500 Left Site L - go to Site I

E

1515 Set up on SG-I-S 0+00 (on Cero)

1520 PID in pre probe hole = 10.5 ppm

breathing zone: PID = 0.0 4-G = normal

1527 take SG reading @ SG-I-S 0+00

51 PID in MIP hole = 24.6 ppm peak

breathing zone: PID = 0.0 4-G = normal

$\Delta C = 56 - I - N - (O + CO)$   
 $(+ve) \rightarrow 56 - I - S - 3 + CO (+) (all +ve)$

than soft lobations need to be preferred for soil gas

1640 1/Ps leaves SG-I for the day

1622 P/D & MIP hole = 0.0

1617 take SG reading @ SG-I-S-2+CO

breathing zone :  $P/D=0.0 : 4-C = \text{normal}$

1612 P/D in pre-pause hole = 1.6 ppm

1605 pre-pause reversal @ ~ 3.5-4.0, below grade

1600 set up on SG-I-S-2+CO (as control)

breathing zone :  $P/D=0.0 : 4-C = \text{normal}$

16.5 = 0

CD went up to ~ 8 ppm

1621 went up to ~ 4.8 (after 8 sec over 19.52)

Q<sub>e</sub> lower developed below 19.52.

P/D in off-gas = 15 ppm directly over hole

was also apparent (more luminance used than for normal hole)

but chance as such as usual - off-gases

apparent, since the hole did not agree with

1556 while filtering hole up / bon bonze a cavity became

breathing zone :  $P/D=0.0 : 4-C = \text{normal}$

1554 P/D & MIP hole = 2.1 ppm

1553 take SG reading @ SG-I-S-1+CO

breathing zone :  $P/D=0.0 : 4-C = \text{normal}$

1551 P/D in pre-pause hole = 20.0 ppm

1552 pre-pause reversal

1551 set up on SG-I-S-1+CO (as control)

beginning soft gamma

on

DEA + VAE and a lot of "OTC", best at 5% for use by Q56 + survivor. - survivor of was reported to survey the Site in soil sample- PAs today, but left to survey the Site before surveyor left

DEH also assessed Culin as unloading a shipper of sample containers + codelets in the field due to sample supplies for / managing Gru sample @ Gru Culin in sample supplies for / managing Gru sample @ Gru Culin

Points - also summary of soil gas profiles across site  
and other profiles (e.g. 50m apart) as shown

DEH assisted Coll W. at DEG w/ magnetometers  
to out and magnetometer surveys c/ Com Coop (SHP)  
few aching trucks were cleared for long-some!  
10 Miles were laid out and survey w/ mag.

IPS not able to come up with a plan, so no new  
that they just ~~will~~ - full day of surgeries on Tuesday

~~103~~ 63 Nov 80  
int toward minimum 1000 ft. and more

## Soil Gas Survey

09 Nov 91 DEH

0820 DEH + John U. of TPS arrive at Cerro Copper  
after safety meetings for day's activities

0830 Need I-trailer moved to access SG-I-S 3+00

0845 Set up on SG-I-S 3+00 (Cerro Copper)

pre-probe refusal 4 times, no refusal 5<sup>th</sup> time

0905 take SG reading at SG-I-S 3+00

PID = 0.0 4-G = normal in breathing zone

0909 PID in ~~near~~ MYP hole = 2.7 peak

breathing zone : PID = 0.0 4-G = normal

VOCs detected in SG-I-S 3+00 by GC/MYP, so another transect to the S. will be performed

0915 Set up on SG-I-S 4+00 (Cerro Copper)

0925 take SG reading @ SG-I-S 4+00

PID = 0.0 4-G = normal

110Cs detected in SG-I-S 4+00, but location is at

S. fence of Cerro Copper, ~~so~~ up Site H to the S.

so further transect work to the S. will not be performed

0945 set up on SG-I-N 0+00 (Cerro Copper)

0950 take SG reading @ SG-I-N 0+00

0955 PID reading in MYP hole = 0.0

breathing zone : PID = 0.0 4-G = normal

1005 Set up on SG-I-N 1+00 (Cerro Copper)

after trailer is moved

1030 take SG reading @ SG-I-N 1+00

after S preprobe refusals

breathing zone : PID = 0.0 4-G = normal

1055 leave Cerro Copper - move to Site G

|      |                                                                                                                   |                                                                                                                   |      |
|------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------|
| 1115 | Setup on SG-G-LW 0400 (SG-G)                                                                                      | Take SG reading @ SG-G-LW 0400<br>breathing zone : $PID = 0.0$ $H-G = normal$<br>$PID$ in MP hole = 11.9 ppm part | 926  |
| 1125 | Setup on SG-G-LW 1400 (below LWE)                                                                                 | Take SG reading @ SG-G-LW 1400<br>breathing zone : $PID = 0.0$ $H-G = normal$<br>$PID$ in MP hole = 11.9 ppm part | 1325 |
| 1140 | Leave SG-G on IPS to take (wash)                                                                                  |                                                                                                                   |      |
| 1155 | Setup on SG-G-LW 0400 (SG-G)                                                                                      | Take SG reading @ SG-G-LW 0400<br>breathing zone : $PID = 0.0$ $H-G = normal$<br>$PID$ in MP hole = 11.9 ppm part | 1255 |
| 1315 | Setup on SG-G-LW 1400 (below LWE)                                                                                 | Take SG reading @ SG-G-LW 1400<br>breathing zone : $PID = 0.0$ $H-G = normal$<br>$PID$ in MP hole = 11.9 ppm part | 1325 |
| 1325 | Setup on SG-G-LW 2400 (below LWE)                                                                                 | Take SG reading @ SG-G-LW 2400<br>breathing zone : $PID = 0.0$ $H-G = normal$<br>$PID$ in MP hole = 11.9 ppm part | 1325 |
| 1340 | Setup on SG-G-LW 2400 (below LWE)                                                                                 | Take SG reading @ SG-G-LW 2400<br>breathing zone : $PID = 0.0$ $H-G = normal$<br>$PID$ in MP hole = 11.9 ppm part | 1340 |
| 1412 | Setup on SG-G-LW 1400 (SG-G)                                                                                      | Take SG reading @ SG-G-LW 1400<br>breathing zone : $PID = 0.0$ $H-G = normal$<br>$PID$ in MP hole = 11.9 ppm part | 1412 |
| 1448 | Take SG reading @ SG-G-LW 1400<br>breathing zone : $PID = 0.0$ $H-G = normal$<br>$PID$ in MP hole = 11.9 ppm part | 1448                                                                                                              | 1448 |
| 1458 | Setup on SG-G-LW 1400 (SG-G)                                                                                      | Take SG reading @ SG-G-LW 1400<br>breathing zone : $PID = 0.0$ $H-G = normal$<br>$PID$ in MP hole = 11.9 ppm part | 1458 |
| 1515 | To U. of IPS leaves for the day - Sci gas parts<br>compacted & access valve access is sealed w/ silicone          | " " leaves for the day                                                                                            | 1515 |
| 1521 | Take SG reading @ SG-G-LW 1400 (SG-G)                                                                             | Take SG reading @ SG-G-LW 1400<br>breathing zone : $PID = 0.0$ $H-G = normal$<br>$PID$ in MP hole = 11.9 ppm part | 1521 |
| 1531 | Take SG reading @ SG-G-LW 1400<br>breathing zone : $PID = 0.0$ $H-G = normal$<br>$PID$ in MP hole = 11.9 ppm part | 1531                                                                                                              | 1531 |
| 1537 | " " leaves for the day                                                                                            | " " leaves for the day                                                                                            | 1537 |

Self Test Summary

110

## Ground Water Sampling

DEH assists AJC & Nick w/ GW samp. activities until end of day

10 NOV 99 DEH

have GW samp. safety mtg; HEW + 2 IPS vars leave to do GW samp.

AJC & DEH do paper work & prepare for soil sampling on Creek transects - prep. insp. mtg & safety mtg, forms, sample labels, calib. instruments, etc.

Nick & Colin arrive mid-morning w/ sample containers; unload & arrange coolers & containers

~1145 have prep. insp. mtg. for creek transect soil sampling in undeveloped areas; safety mtg. also conducted for this task

All Nick, & Colin go to lunch before beginning transect soil samp.  
DEH puts labels on 6 drums @ Corvo, puts locks on Site N piezometers, and gets gas for generator @ Judith Lake

1400 DEH goes to OBG office

11-2-1

5(3)

|      |                                                                                                                                                  |                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 1100 | respiratory burst on in excel zero - continuous breathing                                                                                        | $\text{PA}_M = 0.040$ |
| 1110 | $\text{PID} = 0.0$                                                                                                                               | $\text{PA}_M = 0.028$ |
| 1120 | $\text{PID} = d.o$                                                                                                                               | $\text{PA}_M = 0.028$ |
| 1130 | breast to get 2 dozen/mile better which were delivered - didn't eat have enough - added 2 more from OSG - TPI of OSG & total of measured on site |                       |
| 1140 | breast to get 2 dozen/mile better which were delivered - didn't eat have enough - added 2 more from OSG - TPI of OSG & total of measured on site |                       |
| 1150 | $\text{PID} = d.o$                                                                                                                               | $\text{PA}_M = 0.022$ |
| 1160 | $\text{PID} = d.o$                                                                                                                               | $\text{PA}_M = 0.022$ |
| 1170 | $\text{PID} = 0.0$                                                                                                                               | $\text{PA}_M = 0.020$ |
| 1180 | $\text{PID} = 0.0$                                                                                                                               | $\text{PA}_M = 0.024$ |
| 1190 | $\text{PID} = 0.0$                                                                                                                               | $\text{PA}_M = 0.024$ |
| 1200 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1210 | $\text{PA}_M = 0.038$                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1220 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1230 | Surface soil sampling at BL - $\text{PID} = 0.0$ (digging core & soil 50%)                                                                       | $\text{PA}_M = 0.038$ |
| 1240 | lodes & boulders                                                                                                                                 | $\text{PA}_M = 0.038$ |
| 1250 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1260 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1270 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1280 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1290 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1300 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1310 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1320 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1330 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1340 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1350 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1360 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1370 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1380 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1390 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1400 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1410 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1420 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1430 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1440 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1450 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1460 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1470 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1480 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1490 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1500 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1510 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1520 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1530 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1540 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1550 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1560 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1570 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1580 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1590 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1600 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1610 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1620 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1630 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1640 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1650 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1660 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1670 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1680 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1690 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1700 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1710 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1720 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1730 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1740 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1750 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1760 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1770 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1780 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1790 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1800 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1810 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1820 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1830 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1840 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1850 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1860 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1870 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1880 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1890 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1900 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1910 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1920 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1930 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1940 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1950 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1960 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1970 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1980 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 1990 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |
| 2000 | begin at BL on side A                                                                                                                            | $\text{PA}_M = 0.038$ |

112

Waste binning 11-30-89 Site A  
23x

1120 PID = 0.0

H-C : Normal } Sharp-table  
PAW : 0.025 }

1127 PID = 0.0

H-C : Normal } Sharp-table  
PAW : 0.037 }

13.

1135 PID = 0.0

H-C : Normal } Sharp-table  
PAW : 0.032 }

13C

1143 PID = 0.0

H-C : Normal } Sharp-table  
PAW : 0.027 }

13

1151 PID = 0.0

H-C : Normal } Sharp-table  
PAW : 0.023 }

PID over surface as sharp going up = 0.6 from peak

1152 PID = 0.0

H-C : Normal } Sharp-table  
PAW : 0.029 }

1201 PID = 0.0

H-C : Normal } Sharp-table  
PAW : 0.026 }

1209 PID = 0.0

H-C : Normal } Sharp-table  
PAW : 0.026 }

# White spruce

113

1315 top boring

PID = 0.0

4-G = normal

RAM = 0.073

} Samp table

PID in auger  $\neq$  4.1 peak

breathing zone = 0.0

1340 surf. soil samp @ BPZ PID = 0.0 on soil + in b. zone

500 surf. soil samp @ BPZ PID = 0.0 on soil + in b. zone

## Waste Bores

12-1-79 W2a/7JF

B2

0842 start first sample

pid - 0.7  
 4gas - normal } sample table  
 RAM - 0.028

10

0850

pid - 0  
 4gas - normal } sample table  
 RAM - 0.027

10

0902

pid - 0  
 4gas - normal } sample table  
 RAM - 0.031

10

0914

pid - 0, at rig

0910

pid - 0.0  
 4gas - normal } sample table  
 RAM - 0.025

13

0919 - pid - 0.2-0.4 at rig

0920

pid - 0.1  
 4gas - normal } sample table  
 RAM - 0.049

1

0930

pid - 0  
 4gas normal } sample table  
 RAM - 0.027

14

0940

pid - 0  
 4gas normal } sample table  
 RAM - 0.020

|     |         |                 |                       |                               |                                    |                 |
|-----|---------|-----------------|-----------------------|-------------------------------|------------------------------------|-----------------|
| 115 | 12-1-99 | 5950 PI.D - 0.5 | $\text{LiAl} - 0.024$ | $\text{LiAl} - \text{Normal}$ | $\text{LiAl} - \text{sample full}$ | 100.1 p.i.d - 0 |
| 107 | 6.6.99  | PI.D - 0.0      | $\text{LiAl} - 0.018$ | $\text{LiAl} - \text{Normal}$ | $\text{LiAl} - \text{sample full}$ | 113 p.i.d - 0.0 |
| 83  |         | PI.D - 0.6      | $\text{LiAl} - 0.021$ | $\text{LiAl} - \text{Normal}$ | $\text{LiAl} - \text{sample full}$ | 315 p.i.d - 0.0 |
| 83  |         | PI.D - 0.0      | $\text{LiAl} - 0.020$ | $\text{LiAl} - \text{Normal}$ | $\text{LiAl} - \text{sample full}$ | 330 p.i.d - 0.0 |
| 131 |         | PI.D - 0.0      | $\text{LiAl} - 0.014$ | $\text{LiAl} - \text{Normal}$ | $\text{LiAl} - \text{sample full}$ | 345 p.i.d - 0   |
| 131 |         | PI.D - 0.0      | $\text{LiAl} - 0.015$ | $\text{LiAl} - \text{Normal}$ | $\text{LiAl} - \text{sample full}$ | 400 p.i.d - 0.0 |

Alumina sample

12-159

BB

116

Milk powder

1530 - 0.1d - 0  
49gms Tissue }  
R4m - 0.015  
sample tube

# Waste storage

1117

12/21/99 134

0555

pid - 5  
q<sub>gas</sub> - Normal } Sample table  
R<sub>AM</sub> - 0.027

0910

pid - 0  
q<sub>gas</sub> - normal  
R<sub>AM</sub> - 0.026

pid - 0.0 at ring

0920

pid - 0.0  
q<sub>gas</sub> - normal  
R<sub>AM</sub> - 0.028

B5

1020 pid - 0.0  
q<sub>gas</sub> - normal } Sample table  
R<sub>AM</sub> - 0.024

1030 pid - 0.0

q<sub>gas</sub> - normal } Sample table  
R<sub>AM</sub> - 0.024

1040 pid - 0.0

q<sub>gas</sub> - normal } Sample table  
R<sub>AM</sub> - 0.023

pid - 0.0 - at boundary

RAM - 0.133

4800 - Normal

1200 Pid - 0

RAM - 0.040

4800 - Normal }  
4800 - Sample }  
1100 Pid - 0.0

RAM - 0.038

4800 - Normal

1130 Pid - 0.0

RAM - 0.035

4800 - Normal

1110 Pid - 0.0

RAM - 0.038

4800 - Normal

1055 Pid - 0.0

12-2-55

Light Source

OTT

07 DEC 89 JER

- 20 DEH meets w/ Mark Green + helper - of Zion Group - to discuss survey services for creek sed. sampling + prior Samp activities
- 1130 DEH leaves surveyors after showing them soil transect locations, GL samp locations, + waste borrow on site N Surveyor also pointed out some cross sections they did of Dead Creek + borrow pit lake Surveyor to ~~not~~ shoot points after lunch

12-20-99 Soil gas survey WCHL

0835 arrive site T (GeoLogger)

John Hascall, IPS

Dave Hardesty, OSH

Bill Wright OSH

SG-I-E-0+00

p1d - 0.0 hole after prep hole  
4gas - normal

p1d - 0.0 hole after sweep  
4gas - normal

Breathing zone - p1d - 0.0, 4gas normal

0930 meet w R. Perry at Rogers cottage

set pts SG-H-E-0+00, A+000, 1+70  
1000 start S6 survey

1010 p1d - 0.0, 4gas normal, breathing zone

MJ's hole: p1d - 0 4gas normal

SG-H-E-1+00:

prep hole - p1d - 0 4gas normal  
mid p1d - 0.0, 4gas normal

1030 - start SG-H-NE

SG-H-NE-0+00

mid - p1d - 0 4gas normal

SG-H-NE-1+00

breathing zone p1d - 0 4gas normal

mid p1d - 0 4gas normal

# Sock Gas Survey

121

56-14-NE-1+60

Breathing zone - p.d.-0.C + gas normal

1110 - p.d.-0.C + gas normal

1140-1240 Lunch

56-I-E-1+00, breathing zone p.d.-C + gas normal

1110P - p.d.-C + gas normal

56-I-E-2+00

p.d.-0 4 gas normal (rule)

Breathing zone p.d.-0 4 gas normal

# Boundary Test trenching - N

03-28-00 254

Site N sounder test trenching

1255 begin trenching C Noth trench, trench #1  
 $PID = 0.0$

loc. zone  
 $RDM = 0.190$   
 4-6 = normal ( $O_2: 22.9, H_2S: 0, CO: 20$ )

1300 PID = 0.0  
 $RDM = 0.274$  } loc. zone  
 4-6 = norm

1305 PID = 0.0  
 $RDM = 0.255$  }  $\beta Z$   
 4-6 = norm

1310 PID = 0.0  
 $RDM = 0.182$  }  $\beta Z$   
 4-6 = norm

1320 PID = 0.0  
 $RDM = 0.257$  }  $\beta Z$   
 4-6 = norm

1328 PID = 0.0  
 $RDM = 0.173$  }  $\beta Z$   
 4-6 = norm

1348 PID = 0.0  
 $RDM = 0.162$  }  $\beta Z$   
 4-6 = norm

1355 begin backfilling trench; respirators off due to low air monitoring results

# Boundary / cut / trench N

12:3

1525 begin Trench = 2 (W. trench) on Site N

PID = 0.0  
PAM = 0.121  
4-G = normal

1530 PID = 0.0  
PAM = 0.132  
4-G = normal

1535 PID = 0.0  
PAM = 0.117  
4-G = normal

1540 PID = 0.0  
PAM = 0.124  
4-G = norm

1545 PID = 0.0  
PAM = 0.117  
4-G = norm

1600 PID = 0.0  
PAM = 0.128  
4-G = norm

1610 PID = 0.0  
PAM = 0.125  
4-G = norm

1620 PID = 0.0  
PAM = 0.123  
4-G = norm

1625 begin back filling trench, respirators off b/c low air monitoring results

foundry trenching  $\rightarrow N$   
OG FEDDO DRILL

Bounder test trenching @ Site N

0855 begin trenching C trench #3 = South trench

PID: 0.0 }  
PAM: 0.068 }  
4-6 = norm }  
4-6 = norm }

RAM: 0.061 } bisection zone  
4-6 = norm }

4-6 = norm }

0900 PID: 0.0 }

PAM: 0.080 } PZ  
4-6 = norm }

4-6 = norm }

0905 PID: 0.0 }

PAM: 0.057 } PZ  
4-6 = norm }

4-6 = norm }

0910 PID: 0.0 }

PAM: 0.057 } PZ  
4-6 = norm }

4-6 = norm }

0915 PID: 0.0 }

PAM: 0.057 } PZ  
4-6 = norm }

4-6 = norm }

0925 PID: 0.0 }

PAM: 0.062 } PZ  
4-6 = norm }

4-6 = norm }

0935 PID: 0.0 }

PAM: 0.060 } PZ  
4-6 = norm }

4-6 = norm }

0945 PID: 0.0 }

PAM: 0.059 } PZ  
4-6 = norm }

4-6 = norm }

# Boundary Test Trunking

1055 P/D = 0.0  
 RAM = 0.062 } BZ  
 4-6 = norm }

1010 P/D = 0.0  
 RAM = 0.061 } BZ  
 4-6 = norm }

1025 P/D = 0.0  
 RAM = 0.055 } BZ  
 4-6 = norm }

1045 P/D = 0.0  
 RAM = 0.050 } BZ  
 4-6 = norm }

1105 begin to back fill trench; respirator off due  
 to low monitoring results

1330 begin trench 4 (E. trench) on Strike

P/D = 0.0 }  
 RAM = 0.055 } BZ  
 4-6 = norm }

1335 P/D = 0.0  
 RAM = 0.027 } BZ  
 4-6 = norm }

1340 P/D = 0.0 }  
 RAM = 0.050 } BZ  
 4-6 = norm }

126

Boundary Trenching Site N  
39E500 / SIEU boundary trenching

1345 P/D = 0.0 } }

RAM = 0.046 } } BZ

10.

4-6 = norm } }

RAM = 0.037 } }

1350 P/D = 0.0 } }

RAM = 0.046 } } BZ

4-6 = norm } }

10.

1400 P/D = 0.0 } }

RAM = 0.030 } } BZ

4-6 = norm } }

10.

1410 P/D = 0.0 } }

RAM = 0.024 } } BZ

4-6 = norm } }

10.

1420 P/D = 0.0 } }

RAM = 0.023 } } BZ

4-6 = norm } }

10.

1430 P/D = 0.0 } }

RAM = 0.021 } } BZ

4-6 = Normal } }

10.

1440 P/D = 0.0 } }

RAM = 0.020 } } BZ

4-6 = norm } }

10.

1450 P/D = 0.0 } }

RAM = 0.025 } } BZ

4-6 = norm } }

10.

1455 began backfilling trench; respirators off

# Antechinus Tracking - Site N 127

10 FEB 00 9:17

Site N Interior trenching

1010 begin interior trench on Site N

PID = 0.0

RAM = 0.069

4-G: normal } br-zone

PID = 0.0

RAM = 0.072 } PZ

4-G: normal

PID = 0.0

RAM = 0.068 } PZ

4-G: norm

PID = 0.0

RAM = 0.063 } PZ

4-G: norm

PID = 0.0

RAM = 0.064 } PZ

4-G: norm

PID = 0.0

RAM = 0.065 } PZ

4-G: norm

PID = 0.0

RAM = 0.063 } PZ

4-G: norm

PID = 0.0

RAM = 0.063 } PZ

4-G: norm

## Interior Trenching - Site N

10 FEB 00 Site N interior trenching

$$\begin{aligned} 1110 \quad P1D &= 0.0 \\ R4M &= 0.064 \\ 4-G &= \text{norm} \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} B.Z.$$

122

1110 take H+S break until 1125

$$\begin{aligned} 1125 \quad P1D &= 0.0 \\ R4M &= 0.057 \\ 4-G &= \text{norm} \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} B.Z.$$

12

$$\begin{aligned} 1135 \quad P1D &= 0.0 \\ R4M &= 0.055 \\ 4-G &= \text{norm} \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} B.Z.$$

12

$$\begin{aligned} 1145 \quad P1D &= 0.0 \\ R4M &= 0.054 \\ 4-G &= \text{norm} \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} B.Z.$$

12

$$\begin{aligned} 1150 \quad DW \quad P1D &= 0.0 \\ DW \quad R4M &= 0.068 \end{aligned}$$

13

$$\begin{aligned} 1155 \quad P1D &= 0.0 \\ R4M &= 0.067 \\ 4-G &= \text{norm} \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} B.Z.$$

13

$$\begin{aligned} 1205 \quad P1D &= 0.0 \\ R4M &= 0.058 \\ 4-G &= \text{norm} \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} B.Z.$$

$$\begin{aligned} 1215 \quad P1D &= 0.0 \\ R4M &= 0.064 \\ 4-G &= \text{norm} \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} B.Z.$$

Stratigraphic section - Site A 129

1220 DL PID = 0.0  
DW DAW = 0.099

1225 PID = 0.0  
DAW = 0.059 }  
4-6 = norm } B2

1235 PID = 0.0  
DAW = 0.052 }  
4-6 = norm } B2

1245 PID = 0.0  
DAW = 0.065 }  
4-6 = norm } B2

1300 PID = 0.0  
DAW = 0.057 }  
4-6 = norm } B2  
PID directly DL of trench after white material encountered  
at ~7' bg = ~6.3 cm peak

1305 stopped excavation of trench to take photos + fresh measurements

1330 begin back fill of trench - rep. on for operator + helper  
- 0% outside of site zone

~~JK~~ 11 FEB 00 Site L interior trenching

0900 begin interior trench @ site L

PID = 0.0  
RAM = 0.067 } BZ  
4G = norm

0905 PID = 0.0  
RAM = 0.084 } BZ  
4G = norm.

0910 PID = 0.0  
RAM = 0.061 } BZ  
4G = norm.

0920 PID = 0.0  
RAM = 0.064 } BZ  
4G = norm.

0930 PID = 0.0  
RAM = 0.067 } BZ  
4G = norm.

0935 DW PID = 0.0  
DW RAM = 0.064

0945 PID = 0.0  
RAM = 0.055 } BZ  
4G = norm

0955 RAM = 0.050 } BZ  
4G = norm  
PID = 0.0

# L-Interior Trending

131

1000 P1D directly out of stack of 3 damaged cleaners in it  
= 0.0

1005 P1D = 0.0 }  
RAM = 0.056 } BZ  
4-G = 101mm }

1015 P1D : 0.0 }  
}

RAM : 0.041 } BZ  
4-G : Norm }

1025 P1D : 0.0 }

RAM : 0.059 } BZ  
4-G : Norm }

1035 P1D = 0.0 }

RAM = 0.057 } BZ  
4-G = norm }

1045 >1D = 0.0 }

RAM: 0.052 } BZ  
4-G: norm }

1045 take warming break until 1110

1110 P1D - 0.0 }  
RAM = 0.055 } BZ  
4-G = Norm }

1120 P1D = 0.0 }  
RAM = 0.071 } BZ

4-G = Norm }

1130 P1D = 0.0  
RAM = 0.065

4-G = Norm }

# Silt L - Intense trenching

11 FEB 80 SIK L int. trench

$^{11}C$  DW P/D = 0.2

Dw RM = 0.144 peak

09

$^{11}C$  P/D = 0.0

Rm : 0.068 }  
4-G : norm }

09

$^{11}C$  P/D = 0.0

Pm : 0.072 }  
4-G : norm }

09

1200 P/D = 0.0

Rm : c. 0.82 } BZ  
4-G = norm }

Dw P/D = 1.4 peak

Dw RM = c. 0.94

09

1240 stop trenching, take photos & meet stakeholders

1245 begin back filling, temps on until drums  
in trench are covered

09

10

SIK

11 FEB

10



# Skills & Interior Tracking

Spec 6 14 FEB 00 m.k. tracking

12c

$$\begin{aligned}
 1030 \quad P1D &= 0.0 \\
 RAY &= 0.066 \quad \} \beta Z \\
 4-G &= norm
 \end{aligned}$$

12c

$$\begin{aligned}
 1040 \quad P1D &= 0.0 \\
 RAM &= 0.085 \quad \} \beta Z \\
 4-G &= norm
 \end{aligned}$$

12c

$$\begin{aligned}
 1050 \quad P1D &= 0.0 \\
 RAM &= 0.081 \quad \} \beta Z \\
 4-G &= norm
 \end{aligned}$$

12c

$$\begin{aligned}
 1055 \quad Div \quad P1D &= 0.0 \\
 RAY &= 0.167 \quad peak
 \end{aligned}$$

12c

$$\begin{aligned}
 1100 \quad P1D &= 0.0 \\
 RAM &= 0.082 \quad \} \beta Z \\
 4-G &= norm
 \end{aligned}$$

12c

$$\begin{aligned}
 1110 \quad P1D &= 0.0 \\
 RAM &= 0.081 \quad \} \beta Z \\
 4-G &= norm
 \end{aligned}$$

12c

$$\begin{aligned}
 1130 \quad P1D &= 0.0 \\
 RAM &= 0.090 \quad \} \beta Z \\
 4-G &= norm
 \end{aligned}$$

12c

$$\begin{aligned}
 1145 \quad P1D &= 0.0 \\
 RAY &= 0.104 \quad \} \beta Z \\
 4-G &= norm
 \end{aligned}$$

12c

$$\begin{aligned}
 1150 \quad P1D &= 0.0 \\
 RAY &= 0.115 \quad \} \beta Z \\
 4-G &= norm
 \end{aligned}$$

## Site #1 Interior Trenching

135

$$1200 \quad P.D = 0.0 \\ RAM = 0.084 \\ 4-C = 105m \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ$$

$$1205 \quad DW \quad P.D = 0.0 \\ DW \quad RAM = 0.129 \\ \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ$$

$$1210 \quad P.D = 0.0 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ \\ RAM = 0.067 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ \\ 4-C = 105m \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ$$

$$1225 \quad P.D = 0.0 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ \\ RAM = 0.074 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ \\ 4-C = 105m \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ$$

$$1235 \quad P.D = 0.0 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ \\ RAM = 0.087 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ \\ 4-C = 105m \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ$$

$$1245 \quad P.D = 0.0 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ \\ RAM = 0.078 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ \\ 4-C = 105m \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ$$

$$1255 \quad P.D = 0.0 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ \\ RAM = 0.088 \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ \\ 4-C = 105m \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} BZ$$

1310 Stop trenching to take photos + measurements

$$1325 \quad \begin{array}{l} \text{begin back filling trench} \\ \text{DW P.D - O.D} \\ \text{DW RAM = 0.117} \\ \text{End resp. on DW of trench in excl. zone} \end{array}$$

100

~~Site~~ Boundary trenching sites  
15 Feb 00 Site C S. boundary trenching (SFT)

0940 begin trenching on SFT 2:

PID = 0.0 }

RAM = 0.068 } bl. zone

4-G = norm )

0945 PID = 0.0 )

RAM = 0.042 } BZ

4-G = norm )

0950 PID = 0.0 )

RAM = 0.071 } BZ

4-G = norm )

1000 PID = 0.0 )

RAM = 0.065 } BZ

4-G = norm )

DW PW = 0.0

1007 stop trenching to take photos + measurements

1015 begin back filling trench - resps: off during  
backfilling due to low monitoring results

1050 begin trenching on SFT 3:

1055 PID = 0.2 )

RAM = 0.058 } BZ

4-G = norm )

1100 PID = 0.2 )

RAM = 0.062 } BZ

4-G = norm )

# Boundary trenching site A

137

1105 PID = 0.2  
RAM = 0.059 } BZ  
4-G = norm

1110 PID = 0.1  
RAM = 0.077 } BZ  
4-G = norm

1120 PID = 0.1  
RAM = 0.059 } BZ  
4-G = norm

1130 PID = 0.1  
RAM = 0.066 } BZ  
4-G = norm

36 Stop trenching to take photos & measurements  
DW PID = 0.1

1145 begin backfilling w/ resps. off due to low monitoring  
readings

16.08.03 Site A weather - rain clouds 82H

Cloudy following 82H

0905 begin int. precia on site A  
P/D = 0.2  
DLM = 0.628 { raining zone  
H<sub>2</sub> = 0.25m

0912 P/D = 0.0  
DLM = 0.071 { RZ  
H<sub>2</sub> = 0.25m

0915 P/D = 0.0  
DLM = 0.066 { RZ  
H<sub>2</sub> = 0.25m

0920 P/D = 0.0  
DLM = 0.079 { RZ  
H<sub>2</sub> = 0.25m

0925 P/D = 0.0  
DLM = 0.077 { RZ  
H<sub>2</sub> = 0.25m

0930 P/D = 0.0  
DLM = 0.076 { RZ  
H<sub>2</sub> = 0.25m

0935 DW PD = 0.3  
DLM = 0.078 { RZ  
H<sub>2</sub> = 0.25m

0940 P/D = 0.0  
DLM = 0.078 { RZ  
H<sub>2</sub> = 0.25m

DW DLM = 0.163

DW PD = 0.3

# Interior Trending Site #

139

1050

$PID = 0.0$

$\Delta M = 0.068$

$\beta Z$

$4-6 = norm$

$\beta Z$

1010

$PID = 0.0$

$\Delta M = 0.037$

$\beta Z$

$4-6 = norm$

$\beta Z$

1010

$PID = 0.0$

$\Delta M = 0.089$

$\beta Z$

$4-6 = norm$

$\beta Z$

$DW PID = 0.0$

$\Delta M = 0.097$

$\beta Z$

1020

$PID = 0.0$

$\Delta M = 0.084$

$\beta Z$

$4-6 = norm$

$\beta Z$

1030

$PID = 0.0$

$\Delta M = 0.071$

$\beta Z$

$4-6 = norm$

$\beta Z$

1040

$PID = 0.0$

$\Delta M = 0.074$

$\beta Z$

$4-6 = norm$

$\beta Z$

1050

$PID = 0.0$

$\Delta M = 0.079$

$\beta Z$

$4-6 = norm$

$\beta Z$

1100

$PID = 0.0$

$\Delta M = 0.064$

$\beta Z$

$4-6 = norm$

$\beta Z$

$DW PID = 0.0$

$\Delta M = 0.090$

$\beta Z$

16 FEB 2022 Site A measurement recording

140 Indoor Temperature Log H

111C  $PID = 0.0$  {  
4-G : 0.0m  
RAI : 0.083

1125  $PID = 0.0$  {  
4-G : 0.0m  
RAI : 0.083

1135 Site 3 monitoring : (After 1st 2 hours 2nd, 3rd)

1210 RAI : 0.075 {  
4-G : 0.0m  
NET → NEI remain to take photos + visual measurement

1235 After the 2nd egg is back fitting - notes on hatching same  
due to PID readings up to ~ 215 ppm on 50% plate  
(although BE + D10 readings are acceptable)

# Intermediate GW Casing profile

141

07 Mar 00 Site I 92 ft

vert. profiling for placement of intermediate ~~bedrock~~  
casing for bedrock GW casing below fill

Harris Drilling is on Site I to do alluvial ag. GW sampling w/ OBG. While on Site I, Harris will also collect soil samples every 10' starting at ~40' below grade to assess impact of native materials below fill. Samples will be assessed visually and w/ a PID. The information will be used ~~as~~ as a guide for where ~~to~~ (i.e.: at what depth) to install the intermediate casing for bedrock GW casing.

1055 DEH + Jim Harris arrive @ profiling location (near the <sup>planned</sup> bedrock GW casing installation location) while the AA-GW sample is purging

1110 Probe begins advancement

BZ PID = 0.0 - 1.4 background (continuously fluctuating)

1145 Begin w/ drawing probe from 40-42' bg

BZ PID = 0.0 - 1.7 -'

1200 Collect acetate liner from sampler - put clear tape over ends and label the liner tube

PID @ bottom of tube = 0.2 - 1.1

material in tube is dark brown fine grained sand w/ dark liquid odor is noted - non-native-type odor

1225 begin advancing deconned probe w/ new liner into same hole

1258 begin w/ drawing probe from 50-52' bg

BZ PID = 0.0 - 1.6

1310 Collect liner from sampler - put clear tape over ends and label liner tube

PID in tube = 134 ppm peak - dark brown coarser sand w/ dark liquid; non-native odor is noted

*Introducing ~~the~~ Working project*

27 Mar (continued)

1315 Jim Morris prepares to go back to office. eg. G-150A location, since a sample was collected and ~~the~~ rods need to be pulled, etc.

1 Note that the PDI instrument utilized for the above test is likely to need service; although properly zeroed & calibrated, the response time of the instrument appears to be slower than normal.

09 Mar 00 DEH

Background soil sample collection for VOCs  
EEG-108 (L. Keeley Construction)

1030 J. Harris + DEH meet @ EEG-108  
L. Keeley front desk is notified that ORG is collecting  
soil samples

1045 DEH collects PS-EEG-108-0.5 FT - RE PLACE " and  
PS-EEG-108- 0.5 FT - RE PLACE - VMS/MSD  
(surface soil samples)

1050 DEH collects PS-EEG-108- 3-6FT- REPLACE  
(subsurface soil samples - collected @ 3ftap)  
Encore (VOC) samplers were not delivered to Site H  
w/in holding times when the background soil samples  
were collected previously. Therefore, today's sampling  
event involved only collection of Encore (VOC) samples to  
replace the samples which ~~exceeded~~ holding times.

~~HHS~~

Alluv. ag. Site H \ never

~1600 DEH + WEW pumped "potable water" out of  
Site H alluv. aquifer casing - The water was contained  
in a 55 gal drum. The water was pumped into the  
casing as it was installed to keep it from "floating",  
since a rubber cap was placed over the bottom of it  
to keep out rotary mud, etc.

## 144 Jittery trending 2nd I

11 Nov 2005 Site 2 int. break 5: 0228

0845 begin freezing

$$\text{v}_1 \text{D} = \sim 0.5.$$

4-G: Norm }  
 PAM = 0.04 } background 1:

$$0850 \text{ PD} = 0.2 \quad \left. \begin{array}{l} \text{PAM} = 0.48 \\ \text{4-G} = \text{norm} \end{array} \right\} \beta_2$$

$$0855 \text{ PD} = 0.2 \quad \left. \begin{array}{l} \text{PAM} = 0.044 \\ \text{4-G} = \text{norm} \end{array} \right\} \beta_2$$

$$0900 \text{ PD} = 0.2 \quad \left. \begin{array}{l} \text{PAM} = 0.059 \\ \text{4-G} = \text{norm} \end{array} \right\} \beta_2$$

$$0905 \text{ PD} = 0.2 \quad \left. \begin{array}{l} \text{PAM} = 0.95 \\ \text{4-G} = \text{norm} \end{array} \right\} \beta_2$$

Blank

5.0 : 6.5 0.03

2.0 : 1.0

2.0 : 1.0

1.0 : 1.0 0.00

1.0 : 0.0, 0.00

0.0 : 0.0, 0.00

0.0 : 0.0, 0.00

5.0 : 0.4 5.0

1.0 : 0.0, 0.00

1.0 : 0.0, 0.00

5.0 : 0.4 5.0

1.0 : 0.0, 0.00

~~work 9-1~~

22-AD-24945

$$w\sqrt{2\pi} \rightarrow g - h$$

$\cdot m \cdot v = W_0$

$$Z_0 = \text{ad } S_{10}$$

~~more or less~~

~~Return to me~~ = my

$$2.0 = 0.01 \times 0280$$

$$Z \cdot D = M \otimes D \otimes S$$

$$\text{meters} = 24$$

$$P_{\text{AM}} = 0.065$$

20 : 04 0918

1789 Temporary regulation

# Anterior Trenching Log I

141

9:50 break to take photos for business travel  
fundings

10:00 resume trenching  
P10 = 0.2      }  
4-6 = norm      }  
4-6 = norm

10:10 P10 = 0.2      }  
4-6 = norm

10:15 P10 DW = 0.2

10:20 P10 0.2      }  
4-6 norm

10:25 P10 = 0.2      }  
4-6 = norm

10:50 stop work to take more measurements

~11:15 begin back filling trench w/ resps. on

Blank

13

25 30 35 40 45

13

25 30 35 40 45

13

25 30 35 40 45

13

13

13

13

## Interior Trunking Kit I

U. int. trench Site I 11 Mar 00

149

1303 Begin trenching

PID : 0.2 } 0.2 }

4-6 : norm } 4-6 : norm } 0.2  
 RAM : 0.049 } RAM : 0.049 }

1310 PID : 0.2 } 0.2 }

4-6 : norm } 4-6 : norm } 0.2  
 RAM : 0.057 } RAM : 0.057 }

1315 PID : 0.2 } 0.2 }

4-6 : norm } 4-6 : norm } 0.2  
 RAM : 0.049 } RAM : 0.049 }

1320 PID : 0.2 } 0.2 }

4-6 : norm } 4-6 : norm } 0.2  
 RAM : 0.046 } RAM : 0.046 }

1330 PID : 0.3 } 0.3 }

4-6 : norm } 4-6 : norm } 0.3  
 RAM : 0.053 } RAM : 0.053 }

1335 DW PID = 1.0 peak

DW PID : 1.0 } 1.0 }  
 4-6 : norm } 4-6 : norm }

RAM : 0.049 } RAM : 0.049 }

150

## Interior tracking sets I

Site I 11 Mer 00 N. ~~area~~ interior French

1350

$$PID = 0.9$$

4-G = norm

E

BZ



$$RAM = 0.053$$

1400

$$PID = \cancel{0.9} 0.6 \rightarrow$$

4-G = norm } BZ

$$RAM = 0.056$$

1410

$$PID = 0.9$$

4-G = norm

$$RAM = 0.047$$

1420

$$PID = 1.0$$

4-G = norm

$$RAM = 0.038$$

1430

$$PID = 1.0$$

4-G = norm

$$RAM = 0.038$$

$$DW PID = 1.0$$

1440

$$PID = 1.0$$

$$RAM = 0.040$$

4-G = norm

1445

stop to take photos + measurements

1450

begin backfilling w/ resps. off

DEZ

## Boundary trenching - Site I

Site I 12 Mar 02 N. boundary trench DEX

151

0821 begin trenching

$$\begin{aligned} P/D &= 0.2 \\ 4-G &: \text{norm} \\ RAM &: 0.065 \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} PZ$$

$$\begin{aligned} 0823 P/D &= 0.2 \\ 4-G &: \text{norm} \\ RAM &: 0.065 \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} PZ$$

$$\begin{aligned} 0830 P/D &= 0.2 \\ 4-G &: \text{norm} \\ RAM &: 0.082 \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} PZ$$

$$\begin{aligned} 0845 P/D &= 0.2 \\ 4-G &= 0.05M \\ RAM &: 0.068 \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} PZ$$

$$\begin{aligned} 0855 P/D &= 0.2 \\ 4-G &: \text{norm} \\ RAM &: 0.066 \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} PZ$$

$$\begin{aligned} 0905 P/D &= 0.2 \\ RAM &: 0.067 \\ 4-G &: \text{norm} \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} PZ$$

$$\begin{aligned} 0915 P/D &= 0.2 \\ RAM &: 0.070 \\ 4-G &: \text{norm} \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} PZ$$

$$DW RAM = 0.075$$

1045

begin bullet filtering w/ resps - off

1025

SVA processing - full photos &amp; measurement

1015

H-6 : norm

RAM : 0.079 }

{ EZ

PID : 0.2

1005

H-6 : norm

RAM : 0.079 }

{ EZ

PID : 0.2

0955

H-6 : norm

RAM : 0.075 }

{ EZ

PID : 0.2

0915

DW RAM : 0.101

DW PID = 0.2

H-6 : norm

RAM : 0.088 }

{ EZ

PID : 0.2

0945

H-6 : norm

RAM : 0.073 }

{ EZ

PID : 0.2

0935

H-6 : norm

RAM : 0.073 }

{ EZ

PID : 0.2

0925

H-6 : norm

RAM : 0.075 }

{ EZ

PID : 0.2

12 Mar 2012 I N. Louna, France

Pulsed Light Processing-~~for~~I

1015

January running state I

153

E. boundary trench Sze 2 12 m, 00

1250 begin trenching

PID : 0.1

4-G : norm

RAM : 0.043

1255 PID : 0.1

4-G : norm

RAM : 0.048

1300 PID : 0.2

4-G : norm

RAM : 0.050

1310 PID : 0.2

RAM : 0.045

4-G : norm

1315

~~PID~~ : 0.2

RAM : 0.044

4-G : norm

1317 stop trenching to take photos + measurements

1333 begin back filling w/ redds. off

GE FG

## Alluvial Aquifer Casing

17 Mar 00 Site H alluv. ag. casing

~1300 Chuck Harris + DEH are @ Site H; Harris is

working on grouting up alluv. ag. casing.

The push probe hole below the casing was not grouted up since it is expected to have collapsed.

According to J. Harris, the push probe hole showed evidence of collapse below the casing during sampling, in the resistance to pushing the screen + rods in successive times in the same hole.

The casing was grouted as follows:

- 1' bentonite chips @ bottom of casing

- bentonite grout to ~ 1' below surface

- ~4-6" bentonite chips on top of grout

- ~ 4-6" concrete on top of bent. chips

OBG will place topsoil / seed over concrete after curing time

1550 ~~After CMW arrives @ Site H~~

DEH leaves site

1600 Harris + CMW leave site to pull rods @ EECO + clean

DCF

samples of auger only? Sample collected by pirate.  
augers vs. they are w/ draw - observed at site  
exposed to be from top 0-2', ~~soil~~ - gets on sandy clay material: dark brown soil also an auger.

1015 5-10', w/draw;  $P(1) = 0.0$

1000 1000' distance w/ no changes between; initial + crest rain has stopped  
seeps. off white bottoms derived  
plains collapsed; bottom soft & buckling seen at dead sample from 0-5', collected in ziploc bag for Vinton (new)  
of a valley mudsample is sand / soil (top) sandy clay (mid/low)  
0-5', is w/draw;  $P(1) = 0.0$  on material on augers

Augering to 15' is com plate; begins to w/ some augers

1940 1940 {  $H_6 = \text{normal}$   
 $P(1) = 0.0$

1935 1935 {  $H_6 = \text{normal}$   
 $P(1) = 0.0$

0930 0930 Holes beginning augering down w/ small diameter  
soil when auger @ 1. Board #1 (SL corner of little hole)  
exc. zone is set up w/ sponge filtering to cover

0800 0800 Holes beginning augering down w/ small diameter  
+ 0.8'; vertical to be held their long  
these moves a pieces of equip. to allow them  
of plowed artifacts (Glen - flat spots is of weather)

0740 ~40', 1/2' max, boulders

0740 - J. Harris

20 Mar 00 W. S. G boundary

Auger ultra-boulders +

20 May 00 Silt 6 w. ground

(continued)

1025 photo taken of auger 5'-10' W. ground #1  
 $PID = 0.0 \rightarrow BZ$

 $4G = norm \rightarrow BZ$ 

1020 withdrew auger from 10'-15';  $PID = 0.0$   
 sandy clay material w/ dark brown soil @ point-of'

auger

2 photos taken - full shot of auger  
 sample collected in ziploc  
 peps off; clean up & move to W. Ground #2

nest fill was not encountered/observed @ W. Ground #1,  
 therefore W. Ground #2 is E. of W. #1, w/ auger  
 b/w Silt G fence + W.B. #1

1045 began augering @ W. B. #2

$PID = 0.0 \rightarrow BZ$

$4G = norm \rightarrow BZ$

1050  $PID = 0.0 \rightarrow BZ$

$4G = norm \rightarrow BZ$

1055  $PID = 0.0 \rightarrow BZ$

$4G = norm \rightarrow BZ$

J. Harris reports he ~~had~~ noticed what may be  
 rubble/rocks/fill from ~0-4'; judging by resistance  
 to auger advancement

1100 J. Harris reports "rocky drilling" @ ~7.5 ft - 10 ft

$PID = 0.0 \rightarrow BZ$

$4G = norm \rightarrow BZ$

# Lots F. - Plot Boundary ID

157

- 1110 @ ~14 fbg a hard object is encountered - J. Harris attempting to drill through it

PID = 0.0  
4-G = norm } BZ

- 1114 refusal @ ~ 14.5 fbg  
J. Harris reports "rocky drilling" 7.5 - 14.5 fbg

- 1117 0-5' w/drawn - very little material on auger  
RM photo taken of auger

no sample collected due to absence of material  
edges of auger are shiny - likely to be from grinding  
on hard objects below grade

1120 PID = 0.0  
4-G = norm } BZ

- 1122 5-10' withdrawn  
fine powdery material on auger ; PID = 0.0  
2 photos taken - full auger length  
- close-up of material

light colored rock fragments mixed in w/ brown powdery  
material - also small pieces of yellowish material

1130 PID = 0.0 } BZ  
4-G = norm }

10-15' w/drawn ; PID = 0.0  
soft black material mixed w/ brown clayey material,  
specks of rock, specks ~~of~~ + pieces of yellow material  
material on stem of auger is mostly black  
material at 14-14.5 fbg is compacted + hard

108

Sill St-West Boundary & D  
20 Mar 00 S7eG W. boundary

1145 3 photos : - full auger

- close-up on auger

" " "

Slight odors noted on material, but no PM reading observed

sample collected from auger material

1200 NEJ arrives on site ; leaves w/ DETH

J-Harris has cleaned up and leaves site for lunch

1300 J-Harris is set up on W. Bound. #3, which is  
W. of W.B. #2

W.B. #2 material was evaluated to be non-native  
or fill, so W.B. #3 is halfway between W.B. #1 + #2

1305 J-Harris begins to auger down C W.Bound. #3

1320 0-5' withdrawn from hole ; PID = 0.0 on soil

dark brown clayey soil near mid pt of auger; mixed w/fine  
lt. brown ~~sand~~ sandy clay near bottom of auger; " " sand

PID = 0.0

4-6 = norm } BZ

1330 2 photos : - full auger

- close-up on auger

Sample of material collected in ziploc bag

on soil

1340 5-10' withdrawn from hole ; PID = 0.0<sup>y</sup>; peak toward bottom

brown clayey soil on auger - lighter toward bottom

PID = 0.0

4-6 = norm } BZ

material mixed w/ fine sand

# Litsky - flood boundary ID

159

- .50 2 photos taken of 5-10' on W. Bound & S  
- fall auger  
- close-up near bottom  
sample collected in ziploc bag

1555 10-15' w/drawn ; P/D = 3.5 ppm peak on soil  
material is brown/grey, sandy clayey silt/  
top is more brown, bottom is more grey  
odor is noted - more on soil @ bottom than @ top

- 1405 2 photos : fall auger  
- close-up near mid-auger  
sample collected in ziploc bag

- material appears to be native, although possibly impacted  
- W. Bound #4 will be to the E, b/twn W.B. #2 + #3

- 1430 begin augering @ W. Bound. #4, (approx. mid pt)  
of W.B. #2 + W.B. #3  
shallow refusal on Y concrete 2 times - expected to be pipe + footing(?)  
use driveway rods to find a "clear area" and auger to 15' plus

1500 begin pulling augers  
1515 0-5' w/drawn ; P/D=0.0 on soil  
material is loose, dark brown silty material  
Slight odors noted ; pieces of fine sand + rock + plastic

- 2 photos : fall auger + close-up

sample placed into ziploc bag  
1520 P/D r 4-6 = 0.0 + norm in B2

160

## Site G West Boundary ID

20 Mar 00 W. Bound. Site G

1530

5-10' withdrawn; PID = 0.0

dark brown silty material w/ bits of rock;

odors noted

2 photos: full auger + close-up

sample collected into ziploc

J. Harris reported hard material (e.g. rock, etc.) @ ~10 ft bg

1540

PID = 0.0 } BZ

4-6 = norm }

1543

10-15' withdrawn; PID = 1.3 peat on soil

PID = 9.5 peat on discolored rag

silty soft black material w/ pieces of rock + wood

odors noted

discolored rag + copper wire on bottom of auger

3 photos: - Full auger

- close-up @ mid/top auger

- close-up @ bottom of auger

sample collected in ziploc bag

PID = 0.0 } BZ

4-6 = norm }

1630

J. Harris moved W. to W. Bound. #5, b/w

U.B. #4 and L.B. #5 (suspected footing)

J. Harris encountered refusal on concrete 3 times to shallow depth - move S., away from bldgs, to advance augers

PID = 0.0

4-6 = norm }

28

After cleaning up, etc.

1730 1. Holes, DEH, + Cuhka PI have stuck for the day

$H_C = \text{norm}$   
PID = 0.0 } BZ

1700

Sample collected in ziploc bag

1 photo of soil on auger

grains got darker near bottom - expected to be impeded

gray silty sand ~ bottom half - adobe noted

1. brown silty sand ~ top half

10-15' w/ drawn ; PID: 1.1 peak on soil

sample collected in ziploc bag

1 photo of soil on auger

1645

1. brown silty sand - appears uniform + same as above

5-10' w/ drawn ; PID: 0.0 on soil

$H_C = \text{norm}$   
PID = 0.0 } BZ

1645

sample collected in ziploc bag

1 photo of same soil on auger

1. brown silty sand - appears uniform

0-5' w/ drawn ; PID: 0.0 on soil

1640 1640  
X-G & Gull Boundary

161

Sample - collected in sample bag

2 photos : full auger + close-up

slightly older noted

1. brown clay near centers of augers

dark brown soil w/ pieces of brick + rock on edges  
5-10' w/ drawn C L.B. #46; PID = 5.1 ppm peak metallicity

46 = norm

PID = 0.0 } 2Z

0845

1 photo of full augers, no sample collected

surface fine sand + small amt. of brown soil  
very little weathering on augers

0-5', w/ drawn C L.B. #46; PID = 1.6 ppm peak

PID directly over hole = 0.0 ppb

46 = norm

PID = 0.0 } 2Z

0835

PID directly over hole = 1.6 ppm peak

46 = norm } 2Z (breathing zone)

0830

No soils able to auger through

J. Harris reported same thing had a 4.5 - 5 floc, which

is approx. width. of L.B. #4 x L.B. #5

0820 J. Harris begins advancing augers to L.B. #6,

that bearings will come loose behind 6 floc.

DEH notches front edge to back (close + reconnection)

like moves a front left which is a true way

0805 DEH, J. Harris, + Clark. PD went to where

21 Mar 00 L. Board. Site 6 9Z

outcrop, ~45°, con gl. to W. Bellamy ID

162

PID over hole = 2.1 mm part

$$4\text{-}6 = \text{norm}$$

EZ

$$\text{PID} = 0.0$$

0940

" slight resistance @ ~ 9.5-10 mm

J. Holes were seen through hard @ ~ 5 cm

$$4\text{-}6 = \text{norm}$$

EZ

$$\text{PID} = 0.0$$

better alignment @ W.F. #7

HE04

is located thru W.F. #6 + W.F. #5 (within 10' of each)

Set up & ready to auger @ W.F. #7 : 12.8-47

W.F.

$$4\text{-}6 = \text{norm}$$

EZ

$$\text{PID} = 0.0$$

HE0

sample collected in the splice bag

2 photos: full auger + close-up near bottom  
on the

- a portion of a small piece of hard black material was found

to be impacted due to PID readings

Majority on an agar plate uniform ~~pattern~~, suspended

dots noted

comes from shallower depths as auger w/ screen

pieces of rock / brick on outside (suspected to have

1. brown sandy material w/ silt

2. PID = 0.4 (6" from auger)

10-15. W/draw from W.F. #6 : PID: 12.9 part @ 6.8m

0940

$$4\text{-}6 = \text{norm}$$

EZ

$$\text{PID} = 0.0$$

0855

$$1010 \quad PID = 0.1 \quad \left\{ \begin{array}{l} H_6 = \text{near} \\ Z_E \end{array} \right.$$

3 places : full Auger  
close-up near top  
bottom

11  
small piece of glass & ~ 6' on auger  
detter material on outside of auger in place  
of 1. broken fine sandy material

10  
Some material as above to ~ 8', then change to  
BZ PID near auger = 0.3 ppm

1000 S70, w/ drama @ W.A #7, PID near = 29.2 ppm

$$1955 \quad PID = 0.0 \quad \left\{ \begin{array}{l} H_6 = \text{near} \\ Z_E \end{array} \right.$$

11  
sample collected in ziploc bag

10  
- close-up near bottom

3 places - full auger

11  
metastable, is just below silty clay & sand - appears uniform

10  
recovery begins at ~ 3.5 ft on auger

PID near hole = 10.9 ppm

BZ PID near auger = 0.2 ppm

@ bottom

0.5, @ W.A #7 drama, PID near = 14.7 ppm

$$1955 \quad PID = 0.0 \quad \left\{ \begin{array}{l} H_6 = \text{near} \\ Z_E \end{array} \right.$$

21 Mar 00 11:50 AM SEC

84 of 114 from 10

## Site #1 field Boundary ID

3 10-15' w/ drawn from W.B. #7;  
 PID peak on soil = 41.5, ~10 ppm on <sup>few</sup> other places  
 highest PID reading @ ~12 ftbg on auger  
 BZ PID near auger = 0.4 ppm  
 material appears uniform on auger  
 It. brown fine sandy material; black compact material  
 @ bottom of auger

1020 Glen of these stopped by to inform DEH that he  
 will have a contractor out to pour a concrete slab  
 for a bldg- extension sometime soon - the work should  
 not impact the stated boring locations

1030 BZ PID = 0.3 near auger  
 2 photos taken : full auger + close-up  
 Samp. collected in ziploc bag

1035 as augers were cleaned of, a rag was found @ the  
 bottom, suspected to have been carried down from  
 a shallower deptz

1040 PID : 0.2      } BZ  
 4G : norm      }

1100 Begin ~~test~~ augering @ W. Bound. #8, located  
 W. of Liese bldg. & ~25' N of the SW bldg corner  
 location is as far N. as reasonable due to utilities in  
 the driveway

1105 PID : 0.2      }  
 4G : norm      } BZ

J. Harris reports "rocky drilling" ~0.5'

DEH raised K-Berry regarding other berries to be

perfected for W. Bound S. & G. - K. Berry

concerned that the bottling on the L. size of Wace (#8)

was the last one, if the berries to the S. were

comparable

D-S. W/strawberries @ 61.8 #8 : P/D = 0.3 Pm (best ground)

recovery bags @ ~ 3 f(bag) : material is dark brown  
S.H.Y clay ! fine sand (presented to the floor-surface) is  
also on sugar

2 photos : full sugar + close-up

P/D = 0.2

$\{$  Hg = norm

P/D = 0.3

Hg = norm

{ 28

1145

sample collected into plastic bag

2 photos : full sugar + close-up

mixed

material is dark brown S.H.Y clay of ground pieces after-

1155

S-TG, W/strawberries @ U.S. #8 : P/D = 0.3 Pm (best ground)

12

11

10

9

8

7

6

5

4

3

2

1

0

1155 PID = 0.2 }  
4G = norm } BZ

10-15' withdrawn from hole to LBL #8

PID = 0.7 peak

material is brown silty clay w/ gravel intermixed to ~12  
ft. brown sandy silt ~12 f<sub>bog</sub> - 13 f<sub>bog</sub> w/ gravel      f<sub>bog</sub>  
turns more gray at ~ 13 f<sub>bog</sub> + more clayey  
very slight odors on soil @ bottom

wire + metal rod on bottom of auger, suspected to have  
been brought down from shallower depth (appears to have  
been a grounding rod for the building)

3 photos: full auger

close-up @ mid-bottom

close-up @ bottom - rod + wire

collected sample into ziploc

1210 PID = 0.3 }  
4G : norm } BZ

1212 hole is back-filled

1240 J. Harris, DEH, + Cahokia PD leave site for the day

1250 J. Harris + DEH review Judith Ln. shallow res. GW  
locations where time-series GW samp. will occur;  
J. Harris thinks the drainage ditch needs to be <sup>partially</sup> filled in  
again so the probe rig can access the samp. location w/o  
blocking both lanes of traffic

1256 J. Harris leaves for the day - it is too muddy on Site 6  
to access the soil profiling locations

100

23 Mar 00 Site G access road DEH

K. Perry approved change order (split 50/50 w/ Solntz/100G) to construct gravel road + pad on Site G for bedrock casing installation.

~1345 DEH + NEJ arrive @ Site G w/ rental Bobcat loader and geo-fabrik fabric. Pad location is flagged and initial section of geo-fabrik is unrolled.

~1445 Chuck Harris arrives + begins operating Bobcat to clear trees from pad area. DEH + NEJ waiting for 1<sup>st</sup> load of rock to be delivered from J-C Hauling.

-1500 K-Perry arrives @ site, briefly surveys activities, notifies DEH that J. Burroughs has called abt. French restoration @ Site I - there are still soft + wet areas

~1515 K-Perry leaves site.

1530 NEJ leaves site

1600 3 loads of rock are delivered to Site G; the first load attempted to spread the rock as it backed in, but hit a soft area and was not able to continue; the second + third loads were dumped beside the first load; WEW arrives on site

1618 dump trucks leave site; C. Harris begins spreading rock

1720 DEH leaves site to fill out daily forms @ field ofc. WEW + C. Harris remain @ Site G

1820 DEH returns to Site G

1830 WEW leaves for the day

## Site G Access road

1900 C. Harris + DEH leave for the day

DEH 3-23-00

24 Mar 00

DEH

Site G access road

0800 DEH + Chuck Harris arrive on site; ~3 loads  
loads of rock are waiting @ the gate

rock - only  
left truck w/  
DEH

trucks are not able to "tailgate" spread the rock  
due to the soft ground and have to dump in piles;  
the trucks are asked to wait before returning;

0830 C. Harris spreads rock using the Bobcat, but is having  
difficulty - making ruts in soft clay @ sides of fabric

~900 TPT is able to order a "high-lift" - dozer w/ bucket - for  
quick delivery + faster spreading of rock;

the Bobcat is loaded on the trailer to get ready to return

~0930 K. Perry + K. Lettby arrive to view activities; report that more rock will

~1000 the high lift is delivered to site <sup>be needed @ Cero tranches</sup>  
<sup>Bobcat. return</sup>

~1020 C. Harris begins spreading piles for access road w/ high  
lift

~1030 TPT leaves site to return Bobcat

~1120 DEH orders 1 load of rock to arrive ~12:30 - 1:00 and  
continuing into the pm

24 March Site G access road

~1230

TPT returns w/ OMS truck after returning ~~asbestos~~

~1240

TPT leaves site

1255

I tandem load delivered ~ dumped on pile due to soft ground

1320

I tandem load delivered - dumped on pile due to soft ground ; truck ~~the~~ became stuck in the rock road when he backed in to dump

C. Harris attempted to push out w/ high lift, did not have success ; DETH borrowed chain from Wies, chain broke ; owner of high lift happened to drive part car offered to provide cable - truck was pulled out w/ high lift using borrowed cable

~1415 Cabot PD (Gary Gray) recommended calling Bauer Trucking to remove + advise on situation w/ soft material and relatively unsuccessful road construction - DETH requested Bauer's phone number ; Gary instead called Bauer and requested a site visit ; C. Harris also recommended calling a company more skilled @ road construction

1420 CMW + WEW arrived on site ; WEW left site soon

after ; CMW helped DETH cut off damaged gas fabric from attempted truck push-out

1440 CMW left site

1445 Roy + John Bauer (Bauer Trucking) arrived on site ; reviewed road construction plans + settings w/ DETH ; made recommendations + gave unit costs ; John Bauer

began operating high lift to remove / level off remains rock from partial road

~1500 I tandem load dumped near Site G entrance

~1520 DEH leaves site  
Cuts out left by truck (dry from concrete shed to site)  
LEW entries on site, assists DEH in removing mud from  
l trailer load of rock ..

~1520

1 trailer load of rock arrives on site

~1420

NEI leaves site after assisting DEH in pulling out logs

~1400

of 6" minus rock has been ordered  
on site! Help lift a 550 lb. site; l trailer load  
DEH, NEI, Cahlen PD + T. Davis (HNRNG) arrive

1330

SAC access rd. constructed

3-27-00

3-27-00 1026

DEH left site for the day  
fuel for long lift, etc.  
rainy cost extra for all materials we had of road cost, purchased  
DEH stayed on site, made phone calls, performed  
Cahlen PD left site for the day

~1330

DEH left site for the day

fuel for long lift, etc.

rainy cost extra for all materials we had of road cost, purchased

1600

DEH stayed on site, made phone calls, performed

Cahlen PD left site for the day

1600

Baum's left site for the day

1550

R. Barr + DEH returned to site G

If OIG were to contact w/ Barr

R. Barr showed DEH prepared materials for road construction

1550

C. Stevens left site for the day

1550

87 & Hillside Rd

TIT

3-27-00 SITE 6 access notes

1545 1 trailer load delivered

1610 1 trailer load delivered

DEH requested 2 loads @ 8am 3-28-00

1615 1 trailer load delivered - last load of the day

1740 T. Dulle of Heritage leaves for the day; Catokra  
PD + DEH leave SITE 6 @ ~1745~~DEH~~ 3-27-00

1300 DEH + T. D. 110 (Hemifuse) same c size  
DEH steps turns + regular load turns near end of road  
increase possibility of climbing near end of road

~1200 WED leaves site after assisting DEH w/ gear change  
load area

~1145 (Traffic load turns → drops near end of race)

~1130 WED arrives on site  
1 turner load turns → drops near end of race

1055 1 turner load turns → drops near end of race

1045 1 turner load turns → drops near end of race

~1010 BTU w/ Hertzberg arms w/ fuel for high lift - fuel out  
+ leaves c ~ 1015 (sets in flake only way)

~935 1 turner load turns → drops near end of race

~920 WED leaves site  
~915 K. Foy → K. LaRue leave site

905 1 turner drops load midway up road; road has  
trails drops load midway up road; road has

WED gets arms on site

8900 1 turner load turns on site; K. Foy, K. LaRue,

DEH requires that the 3rd haul not return c 3rd haul

8835 2 turner loads arrive on site (the 1st haul out

2 turner loads off route to c size

745 DEH + T. D. 110 (Hemifuse) same c size

5-28-00 Site C access rd 828

1840

NEL leaves site G.

1832

Cochetopa PD leaves site G.

1820 - Helitop fuel truck goes to pick up gas cap.

1749 Turn C.R. down up hill to find out where the world  
is heading will be off to him to ride up there  
the due with the motorcycle told him this morning so

1749 Turn C.R. down up hill to find out where the world  
is heading up with motorcycle to ride up there

road

to turn off at Pura field in site 5, rd 8

1749 Pura field turned rd 3) Rock road from down

west road to the down: 1) west road cleared from gate south

1749 Helitop continues to stand rock. NEL has informed operators

1645 DE74 + C.R. leave S.R.

1645 NEL → C.R. owner on site

1645 1 truck " near entrance (103+104)

1645

1645 1 tandem load delivered near pad

1645

1645 1 trailer " near entrance

1645

1645 1 tandem load delivered near pad

1645

1645 1 tandem load delivered to site near pad

1645

1645 DE74 requests trailer be put back on holding to site

1645

1645 1 tandem load delivered to site near pad ! NEL leaves site

1645

addition go to site on pad area

1640 TP7 leaves, NEL arrives & passes NEL a laying out

TP7 arrives on site

1640 1 tandem load delivered to site E end of road near pad

1640

for truck repair - LEL other working

1630 1 trailer load of 3" bedding is dumped @ Cane Cooper

1630

328-cc S.R. access Rd

14.1

160 The 1st sample was taken at site I bedrock well  
161 depth to water. LWC = 12.5, 9, x .053 = 82.21 gal (well volume)  
162  
163 1st sample taken at site I bedrock well  
164 depth to water. LWC = 12.5, 9, x .053 = 82.21 gal (well volume)  
165 First 55-gallon drum is full @ this time, start on second drum  
166 1st sample water from bore down well - doesn't measure  
167 only water @ 105, 4 (bottom of part 2 well)  
168 75 gal pumped from site I - last well out and it's dry the 1st samples  
169 tubing from well and will probably go to site H to pump the.  
170 Pump unit is packed up with the tubing attached. The pump is upright  
171 and the normal format, DI water, is charged. The tubing is  
172 hooked up and disconnected.  
173 There was a thick, black, oily substance covering the pump and  
174 often it was measured from a depth of ~17.5', (below top of well  
175 all) and the water level was about 12.5'.

*Page intentionally left blank*

1110 11-11-00 1130 The gear to burst  
gear down so they may be utilized @ site C  
use more down that will be required to site C, some 8 miles  
away to reduce the load of sandation  
1210 Back from burst - have pumped "no gas" into which bottle took their  
use more down that will be required to site C, some 8 miles  
away to reduce the load of sandation  
1230 If have spaded up around at the "rights" down in the cut  
and I thought we could do more. The material is well what a  
weld pump it into the hole fast due to its physical appearance; also  
will add help maintaining the gradient from the back of the truck after all the  
pumping is complete to haul the empty down to site  
130 Transport more down to site C. In addition carrying material  
1430 Come back to site R to unload the truck and pack up  
backed out to bring to the office to collect fine - Some  
backed out and a graduate multicutting board made  
back to site R to unload contains and prepare for  
1730 Back @ site R to unload contains and prepare for

4-12-00

1730 Back to site R to unload contains and prepare for  
1430 Come back to site R to unload the truck and pack up  
130 Transport more down to site C. In addition carrying material  
130 Transport more down to site C. In addition carrying material  
1430 Come back to site C to collect fine - Some  
backed out to bring to the office to collect fine - Some  
backed out and a graduate multicutting board made  
back to site C to unload contains and prepare for

G

1230 If have spaded up around at the "rights" down in the cut  
and I thought we could do more. The material is well what a  
weld pump it into the hole fast due to its physical appearance; also  
will add help maintaining the gradient from the back of the truck after all the  
pumping is complete to haul the empty down to site  
130 Transport more down to site C. In addition carrying material  
1430 Come back to site C to collect fine - Some  
backed out to bring to the office to collect fine - Some  
backed out and a graduate multicutting board made  
back to site C to unload contains and prepare for

4-12-00

4-11-00

1111

Bellfontelle, LA 187

12 Apr 00 Site H pilot test waste sample collection  
partly cloudy, ~45°F, light breeze JDF  
0915 After prep-insp-mtg. + safety mtg., Harris +  
DEH arrive @ Site H, begin setting up @ RP  
to collect pilot test waste samples (3x 5 gal buckets)

0930 NEI arrives on site + assists DEH in set-up

0950 K. Perry arrives on site

1000 " leave site

1005 begin drilling @ RP

PID = 0.0

RAM = 0.068 } BZ (clay mineral)

4-G = norm

1010 PID = 0.0

RAM = 0.072 } BZ (DW)

4-G = norm

1015 collect tube of waste into bucket - PID on waste ~5.9 ppm

1020 PID = 0.4

(spot check)

RAM = 0.066 } BZ (DW)

4-G = norm

1022 @ ~6' refusal on hard object

collect some black cuttings into bucket from auger

move boring ~5' + redrill

1025 PID in cuttings drum = ~38 ppm peak

1030 PID = 0.3

4-G = norm } BZ (DW)

RAM = 0.065 }

1035 collect additional material from tube - 0-5'; spot check PID  
= 3.3 peak

1038 hit refusal @ ~6' on hard object (expected to be con-

12 APR S.7E.H pilot test waste sample collection

179

| PID  | 4-G                                                                                                                                                                                                                            | RAM  | location                                  |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------------------|
| 1040 | 0.1                                                                                                                                                                                                                            | norm | 0.060 DW BZ                               |
| 1045 | boring moved again ~ 5', <del>a short</del> drilling<br>take short break for driller                                                                                                                                           |      |                                           |
| 1053 | begin drilling in <sup>alternate</sup> new location                                                                                                                                                                            |      |                                           |
| 1055 | collect ~ 1' of material into bucket from ~ 5-6' tube<br>spot check PID = ~ 275 ppm peak on material                                                                                                                           |      |                                           |
| 1057 | 0.2                                                                                                                                                                                                                            | norm | 0.062 DW BZ                               |
| 1105 | 0.1                                                                                                                                                                                                                            | norm | 0.070 DW BZ<br><del>NEI leaves site</del> |
| 10   | material <sup>from</sup> ~ 8' in cuttings drum                                                                                                                                                                                 | PID  | ~ 1260 ppm peak                           |
| 1115 | 0.2                                                                                                                                                                                                                            | norm | 0.058 DW BZ                               |
| 1118 | material in tube from ~ 11-13' collected -<br>Spot check PID = ~ 2881 ppm peak                                                                                                                                                 |      |                                           |
| 1125 | 0.9                                                                                                                                                                                                                            | norm | 0.055 DW BZ                               |
| 1128 | material in tube from ~ 13-18' collected - wet material<br>Spot check PID = <del>~ 1000 ppm</del> <sup>DEP</sup> ~ 665 ppm peak<br>material from ~ 6' - 13' cuttings also collected -<br>PID spot check ~ 1120 ppm on material |      |                                           |
| 1135 | 0.5                                                                                                                                                                                                                            | norm | 0.057 DW BZ                               |
| 1140 | RAM 0.5<br>0.5                                                                                                                                                                                                                 |      | UW BZ<br>DW BZ                            |

12 Apr Site H pilot test work sampling

|      | PID | 4-G  | RAM   | Location |
|------|-----|------|-------|----------|
| 1145 | 0.4 | norm | 0.056 | DW BZ    |

1150 break for lunch + discuss boring progress

1200 Harris leaves site

1205 DEH leaves site briefly ~~then~~, returns @ 1210

1235 Harris returns to site

1245 Harris begins pulling auger tools

|     |      |       |       |
|-----|------|-------|-------|
| 0.4 | norm | 0.066 | DW BZ |
|-----|------|-------|-------|

At

Harris was unable to drill past ~18 ftg after hitting refusal @ ~6 ftg twice before; based on the B3 boring log, fill extended down to ~24 ftg, w/ PID

(C18-24) readings lower than the previous ones @ 0-18;

Harris was also experiencing difficulty w/ the inner tubes nearly being locked into the hollow stem auger due to the materials encountered; in addition, sufficient sample volume was available to fill the sample buckets from drill cuttings

Therefore, the waste sample will be composed over 0-18 ftg and the drill cuttings will be used to fill the buckets

1300 NE arrives on site; leaves @ 1305

|     |      |       |       |
|-----|------|-------|-------|
| 0.4 | norm | 0.070 | DW BZ |
|-----|------|-------|-------|

1310 fill 2nd bucket ~~an~~ (~2 1/2 gal) and part of 3rd bucket w/ drill cuttings generated as the auger were pulled from the hole

PID on cuttings ~ 500 ppm

|      |      |       |       |
|------|------|-------|-------|
| 0.70 | norm | 0.069 | DW BZ |
|------|------|-------|-------|

# Pilot test hole sampling

181

1315 Harris mts bentonite, clear cutting; areas, etc.  
in prep. to fill holes ~~to~~

$$\begin{aligned} \text{PID} &= 0.3 \\ \text{DAM} &= 0.055 \\ \text{4G} &= \text{norm} \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} \text{DW } \text{BZ}$$

1325 Holes are mostly filled

$$\text{PID} = 0.3 \quad \text{DW } \text{BZ}$$

~~depth:~~

~~so~~

1335 PID  $\approx$  0.3 DW BZ

Harris completing holes & ~~pre~~ preparing to decom  
augers + rods

- 1345 PID UW + DW during decom  $\approx$  0.3-0.5 ppm

1415 move drill rig to Site G B3 and set up for drilling  
on 4-13-00

~~1430~~ K. Perry arrives on site, reviews location, leaves site  
@ ~ 1450

1510 Harris leaves site for the day

DEH discusses bedrock well inst. problems w/ GWV, ~~plus~~  
sets up exclusion zone, puts caution tape on areas  
@ Site H, drops off PPE + plastic @ Judith Co,  
and returns to field site for the day

Site G 13 Apr 00 Plot test wesk samp. 0840

~45° berry, clear

0840 Horiz, DETH, Colletia P1 arrive @ Site G

Began cutting @ BZ

P1D = 0.1

PAM = 0.041

4C = norm

|      | P1D               | PAM   | 4C    | Location                                                               | 1 |
|------|-------------------|-------|-------|------------------------------------------------------------------------|---|
| 0840 | ~50 (spot check)  |       |       | sample tube ~4'                                                        |   |
| 0842 | ~65 (spot check)  |       |       | cuttings ~10 fig                                                       |   |
|      |                   |       |       | collect sample wesk & cuttings - <del>cutting</del> ~5-10 fig          |   |
| 0845 | 0.8               | 0.041 | norm  | BZ                                                                     |   |
| 0847 | ~60 (spot check)  |       |       | sample tube ~10 fig                                                    |   |
|      |                   |       |       | collect samp. tube wesk (~18" recovery) from 5-10 fig                  |   |
| 0848 | ~135 (spot check) |       |       | cuttings ~10-15 fig                                                    |   |
|      |                   |       |       | collect cuttings from ~ 10-15 fig                                      |   |
| 0850 | 0.8               | 0.040 | norm  | BZ                                                                     |   |
|      |                   |       |       | no recovery in samp. tube from 10-15 fig                               |   |
| 0855 | ~147 (spot check) |       |       | cuttings ~15-20 fig                                                    |   |
|      |                   |       |       | collect cuttings from ~15-20 fig                                       |   |
| 0858 | ~ 2               |       |       | ~ 2 of recovery from ~15-20 fig                                        |   |
|      |                   |       |       | -176 (spot check)                                                      |   |
|      |                   |       |       | material in tube @ 15-20 fig appears to be impacted clay<br>(@ bottom) |   |
| 0900 |                   |       |       | collect sample from tube                                               |   |
|      |                   |       |       | collect additional cuttings from ~15-20 fig to complete sample volume  |   |
| 0905 | ~30               | 1     | 0.070 | / norm / BZ                                                            |   |

↳ note - top of P1D has soil/west loosed inside of it from a previous reading

post test  
waste *process was complete sampling*  
Site G / Site L 13 Apr 00

183

0910 Harris removes augers + rods, preps for decom +  
hole filling - resp. on

0920 UW PID + DLW PID during hole filling (heat, shurg)  
= no change  
(waste/sol still lodged in tip of PID)

1030 finish @ Site G + move to Site L

Re

1035 K-Perry arrives, observes as DEH / Harris mark boring  
location (B4 from previous work); location was  
scaled from surveyor map (~ 242' S. E. of Metro  
Bldg + ~ 53' E. of Dead Creek fence)

1045 Harris sets up for drilling; K-Perry leaves site

1100 Harris takes lunch - leaves site

DEH takes samples from Site G back to field off

DEH also ~~also~~ cleans PID tip, re-zeroes + recalibrates  
PID

|                                                                                                                           |                     |
|---------------------------------------------------------------------------------------------------------------------------|---------------------|
| TESTED ON:                                                                                                                | 4-13-00 (DATE)      |
| SIGNED BY:                                                                                                                | DEH (SIGN)          |
| JARDS USED:                                                                                                               | 100pm<br>30mbyplane |
| JARDS TRACEABLE TO:                                                                                                       | NIST                |
| ENVIRONMENTAL CONDITIONS ARE<br>SUITABLE FOR CALIBRATION <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |                     |

1140 DEH arrives on Site L; Harris arrived @ ~ 1130  
Cahokia PD left site for lunch

1155 begin drilling @ B4

PID = 0.0

RPM = 0.048

4G = norm

## pellet water sampling

Stk L 13400 P.7st test waste sample

loción

~~green~~ RAN 4-6

1203 refused when drilling with bucket ~2'. drill ~~was~~ to ~3' & collect cuttings. P.D. 2000

卷之三

Collect cuttings from auger from ~5-10'.  
P/D on material ~ 50 ppm (sporulated) peak  
soil - tube is not installed in auger due to debris in  
cuttings - wood, metal, concrete pieces which may cause  
refusal if tube is installed

1215 BZ | 0.0 | 0.061 | norm | 14

1220 install sample tube to attempt to collect sample in it from

upper 15". Recovered in sample tube from ~10-15 ft.  
P/D spike = ~80 ppm on material

to complete sample volume  
1229 PID spike under lid of bucket ~300 ppm

1230 0.2 0.0 0.054 norm

Berry Black arrived on site (outside excl. zone) and communicated that Site N was unbolted for DB6 & others to access it; B. Black left ~1220

1230 Harris begins clean-up, hole-filling, docos procedures

1240 BZ 1-0-0 0.050 .. norm

Site L/N 13 Apr 00 Plot test-waste samp.

25 Harris & DEH + Cohoan PD leave Site L + move to Site N

1345 arrive @ Site N + begin set-up

1400 begin drilling

$$\text{PID} = 0.0$$

$$4-G = \text{norm } \} BZ$$

$$\text{RAM} = 0.041$$

K. Perry arrives on site

1405 ~2' collected in tube from 0-5'

$$\text{PID on material} = 0.0$$

Material has wood + concrete debris in it - collected into bucket

1410 PID = 0.0

$$4-G = \text{norm } \} BZ$$

$$\text{RAM} = 0.050$$

1413 sample tube not installed to get to 5-10' w/o refusal on concrete + wood

PID on drill cuttings = 0.0 from 5-10 ft

concrete + wood pieces in cuttings - some is collected into bucket

K. Perry leaves site

1420 PID = 0.0

$$4-G = \text{norm } \} BZ$$

$$\text{RAM} = 0.049$$

1421 large pieces of rubber - appears to be from large inner tube(s) - observed coming to surface when auger  $\rightarrow$

100

## Site N (34000) Pilot test waste song.

- turned @ ~10-15 fby - not a large quantity of cuttings generated 07
- 1425 Harris pulls auger straight out to collect cuttings from auger flights
- 1428 P/D on auger <sup>from</sup> ~12 fby = 0.0 wet  
1430 " " " " ~14 fby = 0.0 wet 08
- P/D = 0.0  
RAM = 0.048 } BZ  
4G = 10mm 08
- 1435 Harris begins clean-up / hole filling - resps off due to low monitoring results + no detected P/D readings on drill cuttings 08
- 1440 P/D = 0.0  
RAM = 0.050 } BZ  
4G = 10mm 08
- 1510 Harris leaves site for the day - drilling + trailer are left on site - will be picked up 4-14-00 09
- 1520 DEH leaves Site N for the day 09

14 Apr 00 Pilot test waste samp. DEH

'55 Site N - Harris + DEH arrive after having a safety meeting @ field office.

Harris prepares support trailer + drilling (ATV) to move to Site I

0805 Harris + DEH leave Site N to go to Site I

0815 Harris + DEH arrive @ Cerro Copper, begin setting up near ~~B2~~ the leachate well on Site L (B2)

0835 K. Perry is on site briefly + approves drilling location; leaves ~0830

0845 J. Burroughs arrives + talks w/ DEH ab. task; requests that drums generated here be placed on a pallet so they can be moved to the ~~drum~~ area where drums are staged from the bedrock casing installation (inside orange fencing)

'55 J. Burroughs leaves work area; Harris + DEH move a pallet to the work area for drums

0905 Harris begins drilling near leachate well

PID = 0.0

RA.M = 0.079

4-G = norm

} B2

0915 PID = 0.0

RA.M = 0.068

4-G = norm

} B2

Harris hit refusal w/ sample tube in 0-~2 Pay, so tube was withdrawn and augers were advanced to ~5Pay and auger spun to produce cuttings

PID on cuttings ~ 340 ppm

Some of the cuttings from 0-5 Pay collected into bucket

14 Apr 00 Site I pilot test waste sample

~60°F, sunny, light breeze

0920 Sample tube attempted @ 5-10 fbg → refused @ ~8 fbg

0925 Recovery in tube is ~ 8" - PID on material = ~ 260

Cuttings from ~ 5-8' collected into bucket + contents of sample tube

0925  $\text{PID} = 0.0 \text{ ppm}$   
 $4-6 = \text{norm}$   
 $\text{RAM} = 0.066$

0930 Augers advance to ~ 10 fbg w/o sample tube installed  
 PID on cuttings ~ 150

0935  $\text{PID} = 0.0$   
 $4-6 = \text{norm}$   
 $\text{RAM} = 0.061$

PID on cuttings from ~ 10-15 fbg = ~ 450 ppm  
 Some cuttings collected into bucket

0938 UV + DW PID = 0.0

0942 PID on cuttings from ~ 15-20 fbg = ~ 350

Some cuttings collected into bucket

PID ~ 6" above cuttings = 0.0

0945  $\text{PID} = 0.0$   
 $4-6 \sim \text{norm}$   
 $\text{RAM} = 0.083$

0947 PID on cuttings from ~ 20-25 fbg = ~ 85 ppm  
 Some cuttings collected into bucket

10

10

10

10

103

10

10

11

11

12

|      |             |      |                                                        |
|------|-------------|------|--------------------------------------------------------|
| 1030 | $PID = 0.0$ | 1010 | Hornets do give remaining sugar; rats from boring      |
| 1035 | $PID = 0.0$ | 1015 | attempt filters and collection of the boring           |
| 1040 | $PID = 0.0$ | 1020 | collect red in sufficient volume for sample! DCH       |
| 1045 | $PID = 0.0$ | 1025 | the hole has been advanced to ~25 fm + cutting         |
| 1050 | $PID = 0.0$ | 1030 | books able to accomplish this!                         |
| 1055 | $PID = 0.0$ | 1035 | while leaving the cutters in the ground, but due to    |
| 1060 | $PID = 0.0$ | 1040 | Hornets has advanced to remove it from the hole        |
| 1065 | $PID = 0.0$ | 1045 | Cutters left on sugars has stuck below the lead auger; |
| 1070 | $PID = 0.0$ | 1050 | books able to accomplish this!                         |
| 1075 | $PID = 0.0$ | 1055 | the hole has been advanced to ~25 fm + cutting         |
| 1080 | $PID = 0.0$ | 1060 | while leaving the cutters in the ground, but due to    |
| 1085 | $PID = 0.0$ | 1065 | Hornets has advanced to remove it from the hole        |
| 1090 | $PID = 0.0$ | 1070 | Cutters left on sugars has stuck below the lead auger; |
| 1095 | $PID = 0.0$ | 1075 | books able to accomplish this!                         |
| 1100 | $PID = 0.0$ | 1080 | the hole has been advanced to ~25 fm + cutting         |
| 1105 | $PID = 0.0$ | 1085 | while leaving the cutters in the ground, but due to    |
| 1110 | $PID = 0.0$ | 1090 | Hornets has advanced to remove it from the hole        |
| 1115 | $PID = 0.0$ | 1095 | Cutters left on sugars has stuck below the lead auger; |
| 1120 | $PID = 0.0$ | 1100 | books able to accomplish this!                         |
| 1125 | $PID = 0.0$ | 1105 | the hole has been advanced to ~25 fm + cutting         |
| 1130 | $PID = 0.0$ | 1110 | while leaving the cutters in the ground, but due to    |
| 1135 | $PID = 0.0$ | 1115 | Hornets has advanced to remove it from the hole        |
| 1140 | $PID = 0.0$ | 1120 | Cutters left on sugars has stuck below the lead auger; |
| 1145 | $PID = 0.0$ | 1125 | books able to accomplish this!                         |
| 1150 | $PID = 0.0$ | 1130 | the hole has been advanced to ~25 fm + cutting         |
| 1155 | $PID = 0.0$ | 1135 | while leaving the cutters in the ground, but due to    |
| 1160 | $PID = 0.0$ | 1140 | Hornets has advanced to remove it from the hole        |
| 1165 | $PID = 0.0$ | 1145 | Cutters left on sugars has stuck below the lead auger; |
| 1170 | $PID = 0.0$ | 1150 | books able to accomplish this!                         |
| 1175 | $PID = 0.0$ | 1155 | the hole has been advanced to ~25 fm + cutting         |
| 1180 | $PID = 0.0$ | 1160 | while leaving the cutters in the ground, but due to    |
| 1185 | $PID = 0.0$ | 1165 | Hornets has advanced to remove it from the hole        |
| 1190 | $PID = 0.0$ | 1170 | Cutters left on sugars has stuck below the lead auger; |
| 1195 | $PID = 0.0$ | 1175 | books able to accomplish this!                         |
| 1200 | $PID = 0.0$ | 1180 | the hole has been advanced to ~25 fm + cutting         |
| 1205 | $PID = 0.0$ | 1185 | while leaving the cutters in the ground, but due to    |
| 1210 | $PID = 0.0$ | 1190 | Hornets has advanced to remove it from the hole        |
| 1215 | $PID = 0.0$ | 1195 | Cutters left on sugars has stuck below the lead auger; |
| 1220 | $PID = 0.0$ | 1200 | books able to accomplish this!                         |
| 1225 | $PID = 0.0$ | 1205 | the hole has been advanced to ~25 fm + cutting         |
| 1230 | $PID = 0.0$ | 1210 | while leaving the cutters in the ground, but due to    |
| 1235 | $PID = 0.0$ | 1215 | Hornets has advanced to remove it from the hole        |

part of the sample

1245 DEH leaves S. of S. - steps off sample bushes @ field site

144000 field S. of S. - pull along over surface / pull along over protection

NAT

K. Paly

K. Paly removes DEH's presence to most of I per day  
regarding closure road on soil sampling - DEH goes by

1335 DEH leaves C field S. of S. - Hants 3 in process  
of pulling slugs test proso meters

Hants plans to take the proso meters ~~off~~ - They are  
leaving the proso meters onto their support frames

Q

Hants is done pulling proso meters S. of L - ~~test~~ go

1400 Hants is done pulling proso meters S. of L -  
to field off - stage driving @ S. of S. for load up

1415 Hants leaves field off - for the day - will load up  
drill rig & leave area for the day @ S. of S.

W

DEH awards supplies @ field off.

18 Apr 00 DAS (Developed Area Soil) Sampling DEH

Pre-mtg. mtg - performed prior to mobilizing.

Based on USEPA review of Solutia's Developed Area Soil Sampling Plan, the sampling locations have been approved by USEPA.

0900 Harris + DEH arrive @ Judith Ln. waste staging area;

Harris unloads push probe rig + supplies from trailer  
~50°F, cloudy

0925 Harris + DEH arrive @ Walnut St.

Cahora PD, K. Perry, B. Eley (Solutia), TPT, NEI are on site  
NEI + TPT are sampling @ 103 Walnut  
DAS-TZ-S1

0935 Harris + DEH begin setting up on DAS-TZ-S1 (103 Walnut)

PID on surface soil w/ sed + surf. samp. removed = 0.0

0955 collect VOC sample from ~3FT location on from sample tube  
(MacroCore liner)

PID over 3-6 FT = 0.0

over 3-6 FT material is fine silty sand → lt. brown

silty clay lens @ ~ 5-5.5 FT → brown

remainder of sample composited in ziploc bag + placed  
into sample containers

1010 begin restoring hole + surface

1020 move to DAS-TZ-S2 (107 Walnut)

PID over surface soil = 0.0

K. Perry leaves area

1030 collect VOC sample

PID over 3-6 FT = 0.0



## Developed Area Soil Sampling

18 Apr 00 DAS samp.

over 3-6 ft material is generally 1/2 brown fine silty sand - med. gravel @ ~3' > brown clayey silt C ~5.5 - 5.75 fsg

remainder of sample composited in ziploc bag + put on ice

1040 begin restoring hole ; Bruce Eley leaves area

1045 begin probing @ DAS-T2-S3 (103 Walnut)

PID over surface sample hole = 0.0

K. Perry returns

1055 samp-tube recovered from hole - duplicate will also be taken @ this location

over 3-6 FT material is 1/2 brown fine silty sand w/ brown clayey silt lens @ ~5 fsg (~2" thick)

1057 Mike McAfee (USEPA) arrives @ site - speaks w/ K. Perry

1100 B. Eley arrives ; leaves @ ~1105

1110 <sup>2nd</sup> samp-tube recovered - VOC samp. + dup. collected material gradation is same in dup. as in first samp. remainder of material in samp. tubes collected into ziploc + put on ice ; PID over interval = 0.0

1123 begin restoring hole

1133 begin moving to Judith Ln.

1138 begin set-up @ DAS-T1-S1 (105 Judith Ln)

refusal @ ~1.5 fsg , move hole ~ 1'

PID over surf. samp. hole = 0.0

TPT ~~arrives~~ on site ; NEJ also

1155 collect VOC samp. ; TPT + NEJ leave site

# Developed Area-Soil Sampling

193

over 3-6 FT  $\text{PID} = 0.0$

material is brown silty sand, fine, w/ lenses of sandy silt  
@ ~ 4.5 ft + 5.5 ft

remainder of sample collected into ziploc + put on ice

1205 begin restoration

1215 move push probe unit to Judith Ln staging area +  
break for lunch ~~all pushes from area~~

1245 DEH + Harris move to DAS-TI-52 (100 Judith Ln)  
 $\text{PID}$  over surf. samp. location = 0.0

1255 K. Petty arrives

D collect VOC sample

$\text{PID}$  over 3-6 FT = 0.0

material is 1st brown fine silty sand, changing to brown sand  
silt by ~ 5.5 FT; then 1st brown silty sand 5.5-6.0 FT  
remainder of sample collected into ziploc + put on ice

1303 Cabotra PID arrives ; B. Flay arrives

1310 begin ~~#~~ restoration ; B. Flay leaves

1320 begin setting up @ DAS-TI-53 (113 Judith)  
M. McAttee arrives on site

1328  $\text{PID}$  over surf. samp. location = 0.0

1332 retrieve 1<sup>st</sup> samp. tube ; decon MacroCore before collecting  
2<sup>nd</sup> tube for MS/MSD

1344 retrieve 2<sup>nd</sup> samp. tube

Plots after JES, prepare for field work  
TP + NEJ complete samples @ field off,

DEH + Harts leave Jodhpur L. starting area  
Harts is gone for the day

DEH + Harts go to Jodhpur L. use shagging area  
to dispense PPE suit + clean clothes  
K. pony horses start  
M. McAllister horses start  
(whole P) horses to S.A.C (BE crossing insr.)

1415 horse size - deer sampling for the day

1405 respiration

$$P/D over 50\% mortality = 0.0$$

DN 1/2

Collect specimens from both turtles who splice + put  
1/2 hours five sand e 5.5-6.0 kg

market / 15-15/4 day ~ 3-4 kg  
15-4-15 Sunday 15-4-15

collect VDL sample + MS/MSO

After 00 DAS sample  
Afternoon all the birds disappeared

Based on USEPA review of Solutta's Developed Area Soil Sampling Plan, the sampling locations have been approved by USEPA

0900 Harris, DEH, + M. McAlear arrive @ David/Barker School area; M. McAlear arrived a field ofc. as Harris + DEH were leaving - after the safety meeting + loading up supplies; Chuck Harris begins unloading pole unit TPT, NEI, DEH, K. Perry, B. Eley, Cahokia PD, + M. McAlear are in the general area to perform/observe the sampling

weather: ~60°F, light breeze, clear

0915 arrive @ 19th & David St. - DEH + Harris

~~etc.~~  $\hookrightarrow$  DAS-T3-S3

surf. samp. underway

0920 surf. samp. complete - Harris sets up over hole to collect sub-surf sample tube  $\rightarrow$  DAS-T3-S3-3-6 FT background PID = 0.5 ppm; PID over surf. samp. hole  $\sim$  0.7 ppm

0935 Collect VOC sample

PID screening over interval = 0.4-0.5 ppm

material - 3-4 ft. is brown silt w/ clay, 4-5 ft. is brown silt w/ sand, 5-6 ft. is brown silty sand remainder of ~~intervel~~ collected into zip loc + placed on ice

0945 restoration @ DAS-T3-S3

0950 set up @ DAS-T3-S2 (61 David St.)

background PID = ~1.0

PID on surf. samp. hole = ~1.0

1055

soft up on DAS-TS-SI (3415 Basalt)  
 P(D) on surf soil hole = 0.7 (61% ad)

1050

restoring site

reminders of interview collected in to sample + push in  
 potential is 1/1. 50m 3 ft sand 3-6 FT  
 P(D) over material average = 0.7-0.8 (back ground)

1043

Collect VLC sample

1035

soft up on 3420 Basalt → DAS-TS-SI

1030

restoring site - ready to move on

reminders of interview collected in to sample + placed on site  
 material is soft & 6,  
 sandy silt leaves 4-4.5, + 5-5.5,  
 potential is 1/1. 50m 3 ft sand over 3-6 FT w/ brown  
 P(D) over material = 1.0

1020

Collect VLC sample

1015

drilling C DAS-TS-SI (3325 Basalt)  
 P(D) over surf. sample hole = 1.0 (back ground)

1010

site restored + ready to move to next location

reminders of interview collected in to sample + placed on site  
 leaves ~ 4, + ~5, (2" thick)  
 material is 1/1. 50m 3 ft sand over 3-6 FT, w/ brown  
 P(D) over material = 1.0 - 1.1 ppm

1000

Collect VLC sample C "DAS-TS-SI - 3-6FT"

19 April DAS sample.

Asterisk shows good consistency

1205

TPT + NEJ leave site

PID over surf. sample hole = 1.0 (6kg/m²)

1205

TPT + NEJ + K. Fenn on site

FD will be collected later for 5-6 hr sample

Harms, L.H., C. Gobin, P.J. outcome C DAS-T4-SI (109 entries)

1205

move probe try to locate on Edward St.

done resampling site - Harms etc (unstirred best way to

1205

reminders of marker to collect in the pipe + placed on site

3.5 - 6 is 1/11 turns 51/11 sand

marker 3 - 3.5 is 1/1. Between 51/11 w/ gravel;

PID over meter = 0.7 - 0.9 (6kg/m²)

1205

collect VOC sample

K. Fenn ab. location to split samples - leave C ~ 1115

will collect splits on next sampling day - talk further

T. Georges, M. McHaffie, Garry Morris arrive on site,

1205

~~Collect VOC sample~~~~Collect VOC sample~~~~Collect VOC sample~~

1205

PID over surf. sample hole = 1.0 (6kg/m²)

soft up C DAS-T5-S3 (12 secoul/SI.)

1205

site restored &amp; ready to move on

reminders of marker to collect in the pipe + placed on site

1/1. Between sandy strt 3 - 3.5

marker 3 1/1. Between 51/11 sand over 3.5 - 6 ,

PID over meter = 0.7 (6kg/m²)

collect VOC sample C DAS-T5-S1

1205

A developed VOC sample for sampling

Nevado area Soil Sampling  
19 Apr 00 DAS samp.

~1210 collect 1<sup>st</sup> samp. tube from hole

1223 " 2<sup>nd</sup> " " "

1225 collect VOC sample + FD @ DAS-74-S1 - 2-6 FT

PLD over interval = 1.0 - 1.1 (6kg/m<sup>3</sup>) → normal + FD

material is dk. brown <sup>clayey</sup> sandy silt c 3-3.5 frag, brown

silty clay w/sand 3.5 - 6, wet @ 5.5 - 6

remainder of material collected into ziploc + placed on ice

(Cahokia PD,

1245 site restored ; K. Petty, DEH, Harris leave S.R.

1253 Harris, DEH, Cahokia PD arrive @ School St. ; Harris begins packing up probe rig in trailer

1307 Harris, DEH, Cahokia PD leave School St.

Harris is done for the day

Cahokia PD will move to S.R. G

DEH goes to Judith Ln. waste staging area to ~~drop off~~  
drop off PPE etc + decon water

TPT, NE composite samples, fill non-VOC containers, prep for sample shipment @ field ofc.

WEN + DEH also assist

Developed area soil sampling

100

20 Apr 00 DAS samp DEH

Based on USEPA review of Solutia's Developed Area Soil Sampling Plan USEPA concurs w/ the sampling locations

Due to scheduling conflicts w/m Harris, they are not able to provide the push probe rig in the a.m. today

1320 Harris + DEH arrive on Edward St.; Harris unloads push probe rig; very windy, ~60if, partly cloudy

1325 K. Perry + Cahalan PD arrive @ DAS-T4-52 (112 Edward)  
Harris + DEH set up @ above location

PID bkgnd: 0.0-0.4 ~~temp & humidity~~ (humidity)

PID over surf. soil: 0.0-0.1 (bkgnd)

1335 collect VOC samp. @ "DAS-T4-52 - 3-6 FT"

PID over interval: 0.0-0.3

material is 1ft brown silty sand ~3-5.5 fbg, brown silty clay 5.5-6 fbg

remainder of material collected into ziploc + iced

1345 site restoration

~1350 set up @ DAS-T4-53 (125 Edward)

PID over surf. soil: 0.0-0.1 (bkgnd)

1355 collect VOC samp. @ "DAS-T4-53 - 3-6 FT"

PID over interval is 0.0-0.1

material is brown silty clay 3-4 fbg, brown silty sand 4-6 fbg, wet 5-6 fbg

remainder of material collected into ziploc + put on ice

1405 site restoration

After 60 DAS sample

1415 0.01m e DAS-T6-S1 (100 Kms)

T. Georges & M. McMurtry present to collect spilt

PID over surf soi : 0.0-0.1 (67g/m)

Sample

T. Georges & M. McMurtry present to collect spilt

1420 1.5 m tube removed from ~ 3-6 ft

1425 1.5 m tube removed from ~ 3-6 ft

Marlens/ is 1/4 brown sandy sand 3-6 ft

Marlens/ gets slightly darker w/ depth

1430 collected "DAS-T6-S1-3-6 ft" + FA VUC 24/17

part PID over surface = 0.0-0.3  
remains of material collected in the sample - 1cc

1443 Site record ; T. Georges & M. McMurtry leave site

1447 same e DAS-T6-S1 (105 Jams)

PID over surf soi : 0.0-0.2 (67g/m)

1455 VUC sample. collected e .. DAS-T6-S1-3-6 ft "

PID over surface = 0.0-0.3

Marlens/ is 1/4 brown sandy 3-6 ft  
remains of material collected in the sample - 1cc

1500 Site record

1505 same e DAS-T6-S1 (100 Jams)

PID over surf soi, soil sample hole = 0.0-0.3 (67g/m)

# Developed Area Soil Sampling

201

510 collect VOC samp. @ "DAS-T7-S3-3-6 FT"

PID over interval = 0.0-0.5 (bkgnd)

material is brown sandy silt ~3-4 Fug, 1x. Brown  
silty sand - 4-6 Fug

remainder of material collected into ziploc + iced

1520 site restoration

1535 arrive @ DAS-T7-S3 (18 Circle Creek Dr.)

EPA will collect a split @ this location

PID over surf. soil = 0.0-0.4 (bkgnd)

1540 1<sup>st</sup> tube removed; T. Gouger, M. McAfee arrive

Harris draws tube + prepare

1551 2<sup>nd</sup> tube withdrawn from ground

1555 collect VOC samp. @ "DAS-T7-S2-3-6 FT"

& split VOC samp. w/ US EPA

PID over interval = 0.0-0.3 (bkgnd)

material is dk. brown silty clay ~~2-5 Fug~~ - 3-4 Fug,

gray silty clay 4-5 Fug, 1x. brown silty clay 5-6 Fug

material is moist <sup>3-5</sup>, wet @ 5-6 Fug

~~Take~~ remainder of material collected into  
ziploc bag + iced

1600 T. Gouger + M. McAfee leave site

1605 site restored - move to next location

@ DAS-T7-S1 (86 Circle Creek Dr.)

PID over surf. soil = 0.0-0.3 (bkgnd)

1615 collect VOC samp. @ "DAS-T7-S1-3-6 FT"

PID over interval = 0.0-0.4 (bkgnd)

202

No other place where sand & boulders

metastone / is barren sandy clay over 3-6 ft.

(cont'd)

remains of metapelite, calcareous sh. 2-3 ft. thick

1615 S. of section

1630 Same site : DEH, Hematite + Calcite Rd goes to

ED, met. Sh. to 1000 ft. with thin layers

(R.R. coming)

1648 Flumes, leaves for the day, Calcite Rd moves to S. of the G.

G. II, grass, etc.

DEH goes to field G. to compass rose samples,

(cont'd)

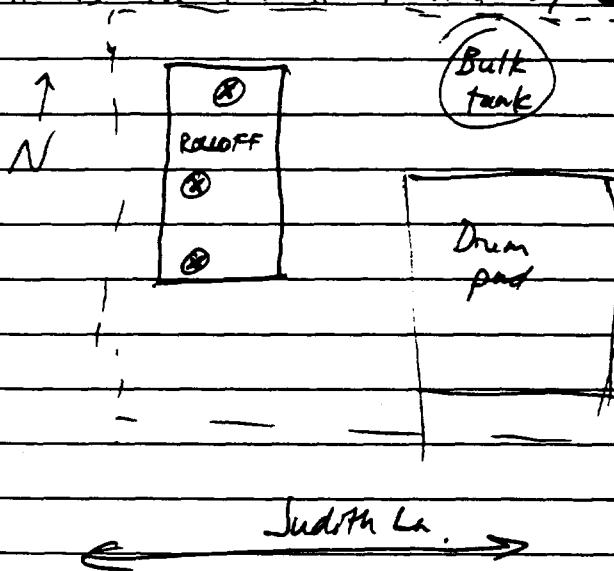
20 April DS sand.

20 April DS sand.

5-24-00 Drum move; roll off soap.

Heritage (Tom & Robert), CCRW, DEH, K. LaRatty

@ Judith Lane; Heritage + DEH move drums from Site G to Judith Ln.; CCRW pumps out water drums @ Judith Ln.; K. LaRatty collects composite sample for waste profiling from the soil roll off @ Judith Ln., DEH observes, K. LaRatty + DEH both take photos of roll off material, composite collected from 3 locations in roll off marked w/  $\otimes$  below:



Composite sample made up of 3 discrete samples of approx. equal volumes, composited in ziploc bag, collected into 1-qt. glass jar; discrete samples collected by pushing MacroCore liner tube into soil until refusal encountered & then withdrawing the tube; K. LaRatty to arrange analytical work for sample

~~After~~

Heritage + DEH pick up ply wood used for drum staging at Site G, move it to the field site. (outside)

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